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An Address
ON
CANCER OF THE LARYNX.

Delivered before the Laryngological Section of the New York Academy of Medicine on Nov. 2nd, 1904.

BY SIR FELIX SEMON, C.V.O., M.D. BERLIN, F.R.C.P. LOND.,
PHYSICIAN-EXTRAORDINARY TO HIS MAJESTY THE KING.

MR. PRESIDENT AND GENTLEMEN,—The keynote of the observations which I shall have the honour of addressing to you was struck in a discussion on malignant disease of the larynx at the meeting of the American Laryngological Association in 1902, when Dr. Bryson Delavan stated that it was time "that the discussion of these subjects upon theoretical grounds should give place to careful studies of what was actually being accomplished by practical men." Self-understood as this desideratum might seem to be, I am afraid that it has been far from being acted upon universally. Indeed, the future historian of the progress of laryngology in our own times will have rather a strange tale to tell, not merely of the diversities of opinion still existing in the different civilised countries in the year 1904 as to diagnosis and treatment of malignant disease of the larynx, but even more of the disregard of the practical results obtained in one country by eminent specialists practising in other parts of the world. It is this aspect of the question with which I shall deal in the course of my remarks. At the same time I do so, I confess, in some fear and trembling. It is not only because I speak under the eagle eye of my friend Dr. Jonathan Wright, the implacable enemy of medical controversy in any shape or form, but more still because I feel that it might seem ungracious that, in return for the magnificent hospitality of which I have been, and still am, the recipient in this country, I should criticise, as will be my duty, the emphatic views recently expressed on diagnosis and treatment of cancer of the larynx by an eminent American laryngologist, my old friend Dr. John Mackenzie of Baltimore. But after mature consideration I have come to the conclusion that I can only do full justice to the task you have so kindly confided to me by endeavouring in the frankest possible manner to show the untenability of his objections to the methods by which British laryngologists have obtained very satisfactory results in dealing with this scourge of mankind. This may be the only occasion in my life on which I shall have the privilege of addressing on this subject—which I have at heart and on which I have worked for fully 20 years—a meeting of American experts, and I strongly feel that a scientific discussion on such a topic ought after all not to be of the nature of a mutual eulogium but an earnest endeavour to clear the atmosphere and to let the better cause conquer.

It is a matter of history that the case of the late German Emperor represents the turning point of modern knowledge of cancer of the larynx. Until then that knowledge had been sadly incomplete and unsatisfactory. Very little was known about the early symptoms and early laryngoscopic appearances of the disease and as a rule its existence was only recognised when it was in an advanced stage. Up to 1878 many cases were in such circumstances treated by thyrotomy, an operation which though positively ideal in early stages is quite insufficient, as we now know, when the disease is more advanced. The results were naturally disastrous and led, after Paul Bruns's sweeping condemnation in 1878,[1] to almost complete abandonment for a time of thyrotomy in malignant disease of the larynx. The more severe forms of radical operation—total and hemi-laryngectomy, enthusiastically welcomed when first introduced, did not at once justify the hopes which had been raised and in the early "eighties" of the last century the outlook for the unfortunate patient afflicted with laryngeal cancer was grave in the extreme.

[1] Die Laryngotomie zur Entfernung Endolaryngealer Neubildungen, 1878. Berlin: August Hirschwald.

Such is the barest outline of the state of matters before 1887. I have on more than one previous occasion[2] insisted on the necessity of every laryngologist being thoroughly acquainted with these historical facts, because it is only from their knowledge that the present state of matters and the untenability of some of the objections raised against modern thyrotomy can be fully understood. For my purpose to-day it must suffice simply to remind you of the facts just enumerated and to refer those who wish for fuller information to previous publications of mine in which these questions have been treated at greater length.[3] It is true that no sensational incident, such as the sad illness of the Emperor Frederick, was required to induce laryngologists and surgeons to try to improve from both the diagnostic and the therapeutic points of view the unsatisfactory state of matters just described. Already in 1886 I had, when bringing the well-known case of the late Mr. Montagu Williams before the Clinical Society of London, drawn attention to several so far unknown or at any rate undescribed laryngoscopic signs which had enabled me in various cases to diagnose laryngeal cancer at an earlier period than was at that time usual. Again, my late friend Professor Eugen Hahn of Berlin had already previously to the illness of the then Crown Prince materially improved the technique, especially of partial extirpation of the larynx and had by the invention of his excellent sponge cannula greatly diminished the mortality previously resulting from septic infection of the lower air passages during and after operation. But although these and similar studies had done pioneer work for a better understanding and more efficient treatment of cancer of the larynx they had remained isolated attempts, and there can be no doubt that the sympathetic interest with which the whole world followed the melancholy course of the Emperor Frederick's illness gave a sudden and universal impetus towards a closer study and better understanding of that formidable disease. First came the revival of the deplorable doctrine of the late Mr. Lennox Browne[4]—viz., that benign laryngeal growths were specially liable to undergo malignant degeneration after intralaryngeal operation. This was followed by the publication of my "Collective Investigation,"[5] undertaken with the help of most of the prominent laryngologists of the world, to test the truth of this assertion. The material thus collected enabled me not only to show the complete want of foundation of Mr. Browne's contention but also to establish more definitely than had hitherto been done the differential diagnosis between benign and the early stages of malignant neoplasms of the larynx and to discuss fully the position and relative importance of the microscopic examination of intralaryngeally removed fragments of new growths for the differential diagnosis between the benign and malignant forms.

Before the report of the "Collective Investigation," which was published in instalments, had been concluded Professor Bernhard Fraenkel of Berlin published his remarkable paper, "Laryngeal Cancer, its Diagnosis and Treatment,"[6] in which, besides studying the histological characteristics of laryngeal cancer, he advocated anew in suitable cases the treatment by intralaryngeal operation which he had first proposed in 1886. In reply, I lost no time in urging in the concluding chapter of the "Collective Investigation" some of the objections which seemed to me obvious against adopting intralaryngeal instrumentation as a suitable means of combating laryngeal cancer. About the same time Mr. H. T. Butlin[7] inaugurated a new era in the treatment of intrinsic cancer of the larynx by showing that owing to our diagnostic progress it was possible to obtain the same results in early cases by thyrotomy, which had previously been believed to be unobtainable by anything short of hemi-laryngectomy. From this time onwards the remarkable national cleavage took place which characterises our present situation. Previously to the Emperor's illness, however imperfect and unsatisfactory our knowledge of laryngeal cancer may have been, there had at any rate been no national differences and

[2] See, for instance, Zur Frage der Radicaloperation bei Bösartigen Kehlkopf-Neubildungen, Fraenkel's Archiv für Laryngologie, Band iv., Heft 3, 1897.

[3] Introductory Remarks to the Discussion of the Operative Treatment of Malignant Disease of the Larynx, at the meeting of the British Medical Association at Swansea, July, 1903, Brit. Med. Jour., Oct. 31st, 1903.

[4] Brit. Med. Jour., May 28th, June 4th (Editorial), 11th, 18th, and 25th, and July 16th, 1887.

[5] Internationales Centralblatt für Laryngologie, 1888–89.

[6] Deutsche Medicinische Wochenschrift, 1889.

[7] Brit. Med. Jour., Jan. 19th, 1889.

the opinions with regard to diagnosis and treatment which dominated our actions were, whether right or wrong, entertained by the whole laryngological world. From 1889 all this changed. A number of German laryngologists, headed by Jurasz[8] and following Fraenkel's lead, advocated, and still advocate, intralaryngeal operations in apparently suitable cases of malignant disease of the larynx. They have found allies in France, in Spain, and in America, whilst, apart from myself, the employment of intralaryngeal surgery in cases of malignant disease of the larynx has been deprecated by Schrötter, Chiari, and Paul Bruns. On the other hand, my own statements concerning the diagnostic importance of some of the early signs of laryngeal cancer have met, I am afraid, with but little attention in other countries besides Great Britain and, similarly, it is astonishing to observe how little impression the reports of British successes obtained by thyrotomy in suitable cases seem to have made upon the minds of operators on the continent of Europe and in America.

In 1900 Dr. John Mackenzie read at the meeting of the American Laryngological Association a paper entitled "A Plea for the Early Naked-eye Diagnosis and Removal of the Entire Organ, with a Neighbouring Area of Possible Lymphatic Infection in Cancer of the Larynx." The contentions of this remarkable paper, with but few exceptions, run straight against all established teaching. The author demands naked-eye diagnosis of malignant disease of the larynx in its early stages to the complete exclusion of the intralaryngeal removal of a fragment for the purposes of micro-scopical examination. The latter he rejects *in toto*, and urges against its employment that the removal of tissues for examination subjects the patient to the dangers of auto-infection at the point of incision and to metastasis elsewhere, that it stimulates the local growth of cancer, and that the method is often inconclusive, misleading, and sometimes practically impossible. In the further course of his observations he emphatically condemns thyrotomy and his teaching culminates in the statement that there was only one rational method, in the majority of cases at least, of dealing with cancer of the larynx: "Early total extirpation of the entire organ with its tributary lymphatics and glands, *whether the latter be apparently diseased or not*, is the only possible safeguard against local recurrence or metastasis." When I first read this paper I was not inclined to take it seriously. Throughout it substitutes theory for practice to such a degree, threatens hypothetical dangers which experience has shown practically to be non-existent, totally disregards the actual results obtained by trustworthy observers, and indiscriminately demands extreme measures where experience has shown milder ones to suffice, that I considered a detailed refutation unnecessary, and therefore referred to it in a chaffing spirit in the course of some lectures I delivered in 1901.[9] But, to my regret, the matter has not ended there. In 1902 Dr. Mackenzie, in a further discussion on cancer of the larynx which took place at the meeting of the American Laryngological Association, declared that he abided by his views and since then I have been credibly informed that these views have exercised a perturbing influence upon not a few minds on this side of the Atlantic. A proof of this appears to me the surprising scarcity of contributions from the United States confirming the favourable results we have obtained in Great Britain by thyrotomy. In these circumstances the opportunity offered through your kind invitation—viz., to investigate the correctness of Dr. Mackenzie's contentions and to try to bring about a more satisfactory state of matters—was extremely welcome to me. I will do my best to do justice to my task but the subject is so large and the number of questions involved is so considerable that I cannot in the limited space of an address critically analyse every sentence to which I take exception. I shall therefore content myself with discussing the four most important of Dr. Mackenzie's assertions only. These are the following: (1) that the naked-eye method of diagnosis is a comparatively neglected method; (2) that the micro-scopical examination of a fragment intralaryngeally removed is to be totally rejected; (3) that early total extirpation of the entire organ with its tributary lymphatics and glands, whether the latter be apparently diseased or not, is the only possible safeguard against local recurrence or metastasis; and (4) that thyrotomy is not up-to-date surgery, is in direct defiance of the rules that should govern us in the treatment of laryngeal cancer, and is a reversion to, and a resurrection of, a method of procedure that was discredited and abandoned half a century ago.

1. According to Dr. Mackenzie the naked-eye diagnosis is a comparatively neglected method. What is the real state of this question? In the introduction I have referred to my endeavours to promote the knowledge of the subjective signs and laryngoscopic appearances of the early stages of malignant disease of the larynx. Having in 1886[10] and 1888[11] enumerated in two communications of mine some of these signs I reverted to the subject at greater length in the "Collective Investigation" I undertook in 1888 and devoted an entire chapter of my report to a systematic description of the minute details which in a number of cases had enabled me to diagnose laryngeal cancer at a comparatively early period. This description has, so far as I know, remained up to this moment the last word on the subject. I am not aware that one single trustworthy sign has been added to those I enumerated in that chapter and these signs have continued to enable me, and those who trusted my statements, to arrive at an early diagnosis in most of the cases which have since come under our observation. At the same time I have been particularly careful not to over-state my case nor to assert that any one of these signs or even several taken in conjunction could, in all cases, infallibly establish the diagnosis.[12] When I returned eight years afterwards to this question[13] I stated, even more emphatically than I had done in 1888, verbatim as follows: "Unfortunately, with the only exception of those cases in which it is possible to intralaryngeally remove a fragment of the new growth and to establish its epitheliomatous nature by the help of the microscope, *not one single sign* in the early stages of malignant neoplasm of the larynx is in itself so characteristic that it establishes with absolute certainty the malignant nature of the formation. The contour, the seat, the condition of the surface, the colour of the new growth itself, the condition of the neighbourhood, the mobility of the vocal cord, the age of the patient, other subjective symptoms, they all may and will *assist* the experienced eye in making the diagnosis, particularly when several of them *jointly* raise such suspicion, but all of them are not *absolutely* characteristic in the earliest stages, and the possibility of a mistake is not excluded in some less characteristic cases." Butlin, too, has correctly characterised the situation when he said in his introductory paper on the occasion of a discussion on the early radical treatment of laryngeal cancer,[14] that "we were still in this position, and were likely to remain in it for a good many years to come, that we must admit that there are three classes of cases: the first, in which anyone and everyone can make the diagnosis; the second, in which the better instructed or more experienced make it and others do not; and the third class in which the conditions are so obscure that no one can make the diagnosis, unless the larynx is opened and in some of which it is even then difficult to be sure of the nature of the disease."

That, gentlemen, is, I maintain, a true description of the present state of matters. However much we all desire,—and I do not yield to Dr. Mackenzie in that respect—further to advance our clinical knowledge of the early stages of laryngeal cancer, we have not made diagnostic progress since 1888. Although, no doubt, in the great majority of cases an experienced observer will make the correct diagnosis of intrinsic cancer of the larynx in its early stages from clinical signs alone, the possibility of occasional errors is anything but excluded. They have occurred in the practice of other experienced observers and they have occurred in my own. And what is most important in view of Dr. Mackenzie's light-hearted advice—viz., to perform extirpation of the whole larynx with its tributary lymphatics and glands on the strength of naked-eye diagnosis alone—is the fact noticed by others[15] as well as by myself, that when an error in diagnosis is committed it is more commonly on the side of regarding an innocent growth as a malignant one than a malignant growth as an innocent one. Let me illustrate this from my own experience. I have always considered it my

[8] Heymann's Handbuch der Laryngologie, Band i., Zweite Hälfte, 1898.
[9] Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air-Passages, Brit. Med. Jour., Oct. 9th, 1901.
[10] A Case of Partial Extirpation of the Larynx, &c., Transactions of the Clinical Society of London, 1886.
[11] Die Krankheit Kaiser Friedrich des Dritten, Internationales Centralblatt für Laryngologie, Band v., Heft 2, 1888.
[12] Die Frage des Ueberganges gutartiger Kehlkopfgeschwülste, &c., Ibid., 1888, 1889.
[13] Fraenkel's Archiv für Laryngologie, vol. vi., Drittes Heft.
[14] Brit. Med. Jour., Oct. 26th, 1895, p. 1034.
[15] Ibid., vol. ii., 1903, p. 1124 (Dr. Jobson Horne).

duty to put my diagnostic mistakes on record to serve as a warning to others. Now, once only in my life, so far as I know, have I at first considered a growth which ultimately turned out to be a malignant one to be innocent. This was the case which Mr. S. G. Shattock and I described in 1891 and 1893 as an "Anomalous Tumour of the Larynx" in the Transactions of the Pathological Society of London. On the other hand, I have in two cases performed thyrotomy in elderly persons for an apparent epithelioma whilst in reality the affection was papillomatous.[16] In one case I have been not a little surprised when a tumour which I had believed to be carcinomatous turned out to be tuberculous;[17] in two cases I have operated without being absolutely certain of the nature of the tumour with which I had to deal. In one of these cases the disease was indeed found to be malignant;[18] in the other one, however, even after opening the larynx, inspecting the ulcerating growth in its entirety, and having a microscopic examination made by Mr. Shattock whilst the patient was kept under the anæsthetic, it was impossible to decide there and then whether the neoplasm was tuberculous or malignant. I therefore operated as if the case had been a malignant one. Fuller microscopic examination, however, proved it to have been tuberculous.[19] In one case which I saw together with Mr. Butlin,[20] and in which he subsequently performed an external operation it was found that an apparently malignant growth was in reality a leucoma, and in another case, also seen in consultation with Mr. Butlin, it was found, when he opened the larynx, that what we had feared to be a malignant growth was in reality a simple extravasation of blood into and around a vocal cord.[21] Thus out of eight doubtful cases in one case only did I regard a malignant growth as an innocent one, whilst in seven cases I committed the opposite error! In other words, if I had proceeded on the lines of Dr. Mackenzie's advice I should, in my own practice alone, have mutilated on the strength of a false diagnosis four patients for life, provided they had survived the operation. I shall return to that aspect of the question further on. In the present connexion, speaking on the strength of large personal experience, I only wish to say that I maintain most strongly that our clinical knowledge of these stages is not yet perfect and that occasional diagnostic mistakes are unavoidable. Dr. Mackenzie himself admits that "there is unfortunately no solitary unequivocal symptom or laryngoscopic sign of cancer," and seems to allow that "after weighing carefully all the facts of the case in our possession a reasonable doubt may remain as to the diagnosis." Just so; but what is the logical conclusion, gentlemen, to which all the foregoing drives us? Surely that it is the positive and imperative duty of every observer to resort to *every* method of diagnosis that could possibly help him in establishing a certain diagnosis before radical operation of any kind is performed. Such a method the great majority of us are convinced we possess in the intralaryngeal removal, whenever possible, of a fragment of a suspected growth for microscopic examination, duly keeping before our minds that this method, like most other human methods, is anything but infallible and must be used with discretion and discrimination. But to this Dr. Mackenzie says: "In the face of all authority to the contrary," emphatically "No."

2. Here we come to the second of his contentions—viz., to the total rejection of the microscope as a diagnostic help in cases of suspected laryngeal growth. His reasons for opposing intralaryngeal removal of a piece for microscopic examination are that such removal "subjects the patient at once to the dangers of auto-infection at the point of incision and to metastasis elsewhere, that it stimulates the local growth of cancer, and that the method is often inconclusive, misleading, and sometimes practically impossible." The first of these statements he supports in his next sentences by saying that "the moment the continuity of a growth is broken in that very moment the pathway is opened for self-poisoning," and that cancer being an infectious process "incision through the cancerous mass opens up at once a broad avenue for auto-inoculation." I need not say that the second of these statements is in no sense a proof of the first; it is merely a repetition in other words. The occurrence of auto-infection in cancer of the larynx is an event of the greatest possible rarity. There are, so far as I know, only three authenticated cases of this kind on record. Two were reported by Dr. David Newman of Glasgow in a discussion on cancer[22] and in a discussion in the Clinical Society of London.[23] The third was published by Mr. Shattock and myself in 1888, when we showed before the Pathological Society of London a specimen of a case of epithelioma of the right half of the larynx in which an epithelial insula existed on the middle of the left vocal cord opposite the primary focus. We made the following remarks on this part of the case:[24] "Lastly, as to the isolated growth on the left vocal cord. Is this due to contact or to metastasis? Infection by contact is a question which is *sub judice* and it is difficult by clinical observation only (as in so many other cases) to arrive at any indisputable conclusion: the direct proof must be relegated to experience. There is no theoretical reason, however, why contact-carcinoma should not occur where the surface opposite to the primary growth is excoriated or ulcerated, as might arise from its contact with decomposing cancerous discharge; for as the secondary glandular growths in carcinoma arise from the direct transference of elements from the primary tumour there seems no reason why the direct implantation of infective epithelium to a granulating surface might not lead to the growth of a second tumour as well, seeing also that the grafting of normal epidermis is so readily effected on a similar surface. That cancer might be communicated to an intact epithelial surface is also conceivable, though in either case it might be held in argument that the spot opposite to the primary tumour was prepared only by the ensuing inflammation to become cancerous, for the same general reason which lay at the bottom of the original disease."

From this quotation it will be seen that I fully admit the possibility of auto-infection in laryngeal cancer, particularly when the surface opposite to an ulcerating new growth should have lost its covering epithelium. But when this theoretical possibility has been admitted and when the practical question is now asked: How often has such inoculation been actually observed? I am happily in the position to state that, so far as my literary knowledge goes, the three cases just mentioned are the only ones ever recorded as examples of local auto-infection in laryngeal cancer. And mark you, gentlemen, this refers not only to cases in which the surface of the laryngeal growth has been broken by the *surgeon's* instrument, but to the infinitely larger number of cases in which, without any surgical interference, the growth in the natural course of events has ultimately broken down *spontaneously*, offering the greatest possible opportunities for local auto-infection. What is quite beyond dispute is, that not one single case exists in laryngological literature in which local auto-infection has been described as having been due to intralaryngeal surgical interference. Seeing the enormous number of cases in which during the last 40 years fragments of growth have been intralaryngeally removed for purposes of microscopic examination, this one fact suffices for me, and, I venture to think, will suffice for most men of a practical turn of mind, to dismiss Dr. Mackenzie's alarming assertion as too theoretical to come within the range of practical politics.

Exactly the same applies with regard to the next theoretical danger with which he threatens us. He says that probatory intralaryngeal removal of a fragment subjects the patient to metastasis elsewhere. I wish he had somewhat more definitely stated what he means by the word "metastasis" when used in this connexion. Does it imply that through the instrumental interference in the larynx, torn-away particles of growth might penetrate into the bronchial tubes or lungs, or, having been coughed up, be swallowed, enter the œsophagus or the stomach, and set up secondary tumours in these parts? Or is it meant in the sense that the circulation being quickened by the local injury done to the larynx by application of forceps or similar instruments, infectious elements were likely to reach distant parts of the body by way of the circulation? Or, thirdly, is it intended to say that by removing a fragment one might stimulate the local growth of cancer, and thereby accelerate the ordinary process of metastasis through the lymphatic channels, which,

[16] THE LANCET, Dec. 15th (p. 1417) and 22nd (p. 1474), 1894, and Brit. Med. Jour., Oct. 31st, 1903. (The doubtful case reported in conclusion of my remarks has turned out to have been papillomatous.)
[17] Recent case.
[18] Recent case.
[19] The Indications of Thyrotomy. Thirteenth International Medical Congress, Paris, 1900.
[20] Fraenkel's Archiv für Laryngologie, Band vi., 1897, pp. 417 et seq.
[21] Ibid.
[22] Glasgow Medical Journal, 1886, p. 94.
[23] THE LANCET, Jan. 19th, 1889, p. 123; Brit. Med. Jour., Jan. 19th, 1889.
[24] Transactions of the Pathological Society of London, 1888, pp. 41, 42.

in the ordinary course of events, would probably have spontaneously taken place at a later period? As the paper does not contain any reply to these questions I must consider every one of them.

All three contingencies just named must, of course, be admitted as theoretical possibilities. But here again practical experience comes to our aid and enables us to ask the question: Where and when have the first two of these theoretical possibilities ever become real facts? The production of a secondary growth in the air- or food-passages by means of implantation of a torn-off fragment could, of course, only be interpreted as autoinoculation in a more distant region. Where is one single proof to be found in laryngological literature that such a case has ever been observed? I know of none, and here again, gentlemen, I beg you to remember how frequently these exploratory removals have been performed during the last 40 years and how certain it would have been, seeing the conscientiousness of our profession, that some of those, at any rate, to whom such an exceptional misfortune had occurred would have considered it their duty to put it on record. The same obtains of dissemination by means of the circulation. I have just had the privilege of looking through the manuscript of a monograph on laryngeal cancer from the pen of Mr. Philip R. W. de Santi, which will soon be published, and from which the author has allowed me to quote the following fact. He has been able to collect altogether hardly 20 cases in the whole laryngological literature in which dissemination by means of the circulation has taken place. Considering that already at the time of the "Collective Investigation," that is to say, in 1888, no less than 1550 cases of malignant disease of the larynx were on record, the total number of the cases reported at present must be, at the most modest computation, between 3000 and 4000, very likely more than that. Yet in less than 1 per cent. of all these cases has dissemination been observed. What makes the argument even more forcible are the following two facts: In the first place, in the majority of the cases of dissemination through the circulation collected by Mr. de Santi no operation had ever been performed. Secondly, if through the breaking of the continuity of the growth the pathway had been opened for self-poisoning one would naturally anticipate that the result of such metastasis or dissemination should occur in those organs the blood-supply of which was intimately correlated with that of the larynx—viz., in the respiratory passages. From Mr. de Santi's collection, however, it is incontestable that in the few cases of dissemination that have ever been reported the abdominal viscera were fully twice as often affected as the lungs. In view of these actual facts I refuse to be frightened by the two first of the possible contingencies dealing with "metastasis elsewhere" with which Dr. Mackenzie threatens us. He would, however, be on more justly debatable ground if he had used the word "metastasis" in that sense, that by removing a fragment one might stimulate the local growth of the cancer and thereby accelerate that process of metastasis through the lymphatic channels, which, in the ordinary course of events, would probably have taken place spontaneously at a later period. It will be best to discuss this question in connexion with the second objection raised by Dr. Mackenzie against the probatory intralaryngeal removal of a fragment of a suspicious growth—viz., the fear that by irritating the growth through partial removal the rapidity of the local progress might be increased. This fear is, of course, no new one. Already in the last chapter of the "Collective Investigation" the question was discussed at considerable length. Dr. Newman, of Glasgow, had described two cases in one of which ten days and in the other 17 days after the probatory intralaryngeal removal enlargement of a cervical gland was detected on the corresponding side of the neck, whilst no such enlargement had previously existed.[23] These two cases have, so far as I know, remained solitary. Nevertheless, the equality of such an occurrence having been shown, it is the less permissible to leave it out of consideration because Dr. Newman's observations are certainly in accordance with the common surgical experience that after incomplete extirpation of cancer in other parts of the body the rate of growth of the remaining part usually quickens. Personally I am under the impression—for it is no more than an impression—that in a few of my own cases after probatory intralaryngeal removal of fragments the neoplasm seemed to increase in size somewhat more rapidly than before. I am therefore quite ready to accord a respectful reception to this argument of Dr. Mackenzie.

But here, again, practical experience helps us in refuting this plea. I can hardly imagine that nowadays one single laryngologist should when meeting with a suspicious laryngeal growth pounce at once upon removal of a piece for microscopic examination and should when this examination had corroborated his clinical fears fold his hands in his lap and tell his patient with a regretful shrug of his shoulders that there could unfortunately be no doubt that he suffered from cancer and that the little intralaryngeal operation meant "the beginning of the end." Surely the proper attitude of a practical man when he discovers a suspicious growth in the larynx is to tell his patient that ar operation would probably be required in any case and that it was of the greatest importance to remove if possible a small fragment from within in order to decide whether the operation could be completed by intralaryngeal means or whether immediate external operation was required. Should the patient in such circumstances refuse to consent to any external operation I should consider it my duty to explain the situation fully either to him, or to his family, or to his usual medical adviser. (No rule applicable to all cases can be laid down as I know from large personal experience.) Should he even then persist in his refusal I should certainly not proceed to intralaryngeal instrumentation as this could only do good in the event of the growth proving to be innocent, but might expose the operator, if unfortunately the microscope proved malignancy, to all sorts of recrimination. This practical attitude, which was first recommended by Dr. Newman, does justice, I venture to think, to the interests of the patient as well as to the conscience of the medical attendant. As a matter of fact, I have found that in exceedingly few cases only will external operation be absolutely rejected when the situation is clearly although kindly explained to the patient. Seeing that the microscopist's opinion may be expected within a few days from the performance of the intralaryngeal removal, I feel sure that in cases of intrinsic laryngeal cancer the danger of metastasis occurring within that interval is so exceedingly remote that it need not be taken into serious consideration. The whole question is, in fact, whether the practical advantage to be gained is outweighed or not by the theoretical dangers to which the little intralaryngeal operation exposes the patient. Seeing the help that the microscope has so often given me in difficult cases of this kind I personally have no hesitation in following my great teacher's, the late Professor Traube's, principle, that when one is confronted with two evils one ought to select the smaller. In other words, I am absolutely in favour of microscopic examination whenever this is possible.

But Dr. Mackenzie says, thirdly, that "the method is often inconclusive, misleading, and sometimes practically impossible." Here I must again refer to the "Collective Investigation" and express my regret that our author should have so entirely disregarded the lessons taught therein. What I particularly object to in his statement is the use of the word "often." That *occasionally* microscopic examination of an intralaryngeally removed fragment might be inconclusive and misleading is, of course, known to every laryngologist in the world. The shortcoming may be due to the fact that a non-characteristic piece of the growth had been removed or that the latter was a composite one and that the fragment caught in the branches of the forceps happened to be of a nondescript or even apparently innocent character. Occasional errors in such circumstances are, of course, unavoidable. Again, that in some cases it is practically impossible to remove a piece for microscopic examination must also be freely admitted. But is a valuable method to be altogether rejected because in some cases it is inconclusive and misleading and because in others it cannot be employed? That means rushing into indefensible extremes. We possess so few methods absolutely infallible in our art that it appears to me positively unpardonable if we omit to avail ourselves of a method of the greatest value in a good many cases for no other reason than that it was not infallible in all and I may, if the defects of the microscope are emphasised, perhaps be allowed gently to remind its opponents of the instances in which its evidence upsets the most cocksure clinical diagnosis. Amongst my own diagnostic errors, to

[23] Discussion in the Clinical Society of London, Jan. 11th, 1889. See THE LANCET, Jan. 19th, 1889, p. 123.

which I referred in a previous part of this address, is the case which last year I reported at length at Swansea. In that case two distinguished laryngologists had not the least doubt that the growth was of a malignant nature, nor did this seem doubtful when the larynx had been opened and the growth removed by thyrotomy.[26] The pathologist's verdict, however, was innocent papilloma. I was not at all inclined to credit this at the time and the less so when within a year recurrence took place. The patient was again seen by two experienced laryngologists who felt sure that the disease was malignant. He refused renewed operation and lives now, I have just ascertained, two years after the first operation, in perfect health. Such a case teaches humility. Another instance of a similar kind just comes under my notice, whilst I am preparing this address. It has been described by Dr. Garel of Lyons, in the *Annales des Maladies de l'Oreille et du Larynx* (November, 1903). In this case the patient was a girl, aged 18 years, who suffered from a growth on the left vocal cord. A piece was intralaryngeally removed and the pathologist diagnosed cancer. This was disbelieved on account of the youthful age of the patient and no radical operation was performed. The patient succumbed to her disease, which later clinically proved to be undoubtedly cancerous, within two years from the beginning of the illness, and Dr. Garel, in his concluding remarks, frankly expresses his regret that he should have been misled by the clinical experience having been at cross-purposes with histological evidence. Cases like the two just mentioned are so eloquent in the lessons they teach that comment is superfluous. Within the limits of this address I cannot enter more fully upon this question. It has been thoroughly threshed out in the "Collective Investigation" and its result has been summarised in the following conclusions, which I translate verbatim:—

> Microscopic investigation of intralaryngeally removed fragments in cases of doubtful laryngeal neoplasms is a valuable, but not infallible, help to clinical diagnosis. It ought to be used in all cases in which it is possible. This is by no means always the case, inasmuch as in cases of sub-mucous infiltrating cancer, intralaryngeal removal of fragments is impossible. If such a removal is available one ought never to forget: (1) that it is by no means certain that the examination may at all yield results characteristic of any definite form of tumour; (2) that even when the examination yields apparently characteristic results the possibility must be kept in view that we have to do with a mixed form of new growth. This is particularly important in cases in which the tumour is clinically suspicious, and in which the microscopic appearance proves its benignancy. But the reverse is also possible, as shown by a case of Schmiegelow's. It will therefore be always desirable to transfer the microscopic examination, if it be possible, to an expert pathologist. The pathologist, however, can only give an opinion on the fragment submitted to him, and not on the disease itself from which the patient suffers, except when he finds in this fragment *positive* characteristics of malignant new growth. Examination must not be limited to the investigation of one single section, but must be extended over the whole fragment, which accordingly has to be cut up into sections, unless already previously the diagnosis of malignancy can be established with certainty. If necessary cautious intralaryngeal removal and microscopic investigation of fragments of suspected growth must be repeated several times, *unless meanwhile clinical symptoms which are incompatible with our present knowledge of the symptomatology of benign growths establish with certainty the malignant character of the suspected growth.* In such cases radical operation, if otherwise indicated, is not to be postponed until the diagnosis has been confirmed by the microscope.

I feel sure, gentlemen, that if you will proceed upon the lines of this advice, which is derived from the collective experience of the most prominent laryngologists of the world, you will serve the interests of your patients infinitely better than if you reject the help of the microscope on the strength of theoretical dangers. As to the method which Dr. Mackenzie proposes to substitute for the aid given by the microscope—viz., exploratory thyrotomy—I have not a word to say against it so long as its use is restricted to cases which really demand it—i.e., to cases in which clinical experience leaves the nature of a suspicious growth doubtful, in which microscopic examination is either impossible or inconclusive, and in which the conditions of the individual case make it imperative to arrive without delay at a correct diagnosis. If, for instance, in circumstances such as those just described, the growth were situated very near the posterior wall of the larynx and threatened to invade that part I would certainly propose exploratory thyrotomy, as by waiting longer the chances of effecting a cure by less serious radical operation might be lost and total extirpation of the larynx ultimately become unavoidable. But, speaking from large experience, I can truthfully say that it is only in a minority of cases that exploratory thyrotomy is indicated, and though the operation need no longer be regarded as a very serious one in itself still it is not altogether devoid of risk when the class of patients is considered who form the bulk of these cases—middle-aged or elderly men, often enough with all sorts of complications which render any operative interference anything but desirable. In addition, it must not be forgotten that no guarantee can be given that some impairment of voice might not result from thyrotomy. I should therefore not agree to its immediate routine use in all cases in which clinical experience leaves the nature of a suspected growth doubtful and be rather guided as to its employment by the circumstances of every individual case. With this I leave the diagnostic side of Dr. Mackenzie's proposals and come to his therapeutic suggestions.

3. The first of these is that early total extirpation of the entire organ with its tributary lymphatics and glands, whether the latter be apparently diseased or not, should be performed as the only possible safeguard against local recurrence or metastasis in practically all cases of malignant disease of the larynx as soon as the diagnosis had been established. It is true that in the last part of the paper it is admitted that there may be "exceptional" cases in which a "very small growth, distinctly circumscribed, remote from the middle line, and not of a specially malignant type, may possibly be removed with safety" by extirpation of half of the larynx and the lymphatics on the corresponding side. But even this admission is made grudgingly, and from the whole tenour of the paper and the context of the paragraph in question it is perfectly obvious that operation for cancer of the larynx, to be in the author's opinion complete, ought to embrace nothing less than removal of the whole organ with its lymphatic vessels and glands. This recommendation is based upon the author's contention that the severity of surgical interference, when dealing with cancer, ought to be the same in whatever part of the body a malignant growth may be met with. This contention again shows a profound disregard of practical experience. Whilst no sane person has ever asserted that cancer is one thing in one part of the body and another thing in another, both careful clinical observation and the results of surgical interference have incontestably shown that—other circumstances being equal—both the severity of the required interference and recurrence after operation depend to a degree, the practical importance of which can hardly be over-estimated, upon the question of the primary localisation of the malignant new growth. Every surgeon when called upon to give a prognosis and to operate in a case of epithelioma of the lip, the ear, or the penis knows that the prognosis with regard to recurrence is infinitely better, the amount of interference required much smaller, than in a case of epithelioma of the tongue, or pharynx, or in a case of cancer of the breast. These facts are so fundamental and so generally admitted that I hardly think a single surgeon will be prepared to deny them.

Now the larynx with regard to this question occupies a very peculiar position indeed. Exactly 25 years ago the late Professor Krishaber of Paris[27] proposed to divide malignant growths of the larynx into two categories, "intrinsic" and "extrinsic" forms. In the former are included tumours originating from the vocal cords, the ventricles of Morgagni, the ventricular bands, and the subglottic cavity within the borders of the larynx proper. The term "extrinsic" is applied to tumours originating from the epiglottis, the posterior surface of the cricoid plate, the arytæno-epiglottic folds, and the inter-arytænoid fold. This classification is much more than one of mere convenience. It signalises a fact of the greatest possible clinical importance and one which has been confirmed by a quarter of a century's clinical observation—viz., that in the intrinsic variety the disease remains for a long time a purely local affection and shows only at a comparatively late period a tendency to metastasis, whilst in the extrinsic variety, owing to different conditions of lymphatic anastomosis, the neighbouring glands are already affected at a very early period, and, indeed, are usually found to be invaded when the patient first comes under observation. There is nothing mysterious or inexplicable about this remarkable difference; it simply depends upon the fact that the lymphatics of the region, which constitutes the intrinsic variety, form much more a network of their own and anastomose much less freely with those of their neighbourhood than those which supply the upper parts and external parts of the larynx. It is true that no complete agreement reigns

[26] Brit. Med. Jour., Oct. 31st, 1903.

[27] Gazette Hebdomadaire, 1879, vol. xvi., p. 518.

as to the details of these conditions of the lymphatic supply amongst the various observers who have particularly studied this question, such as Luschka, Teichmann, Sappey, Poirier, Most, Cunéo, and de Santi.[28] Whilst they all are unanimous in declaring that the lower parts of the larynx, and the vocal cords in particular, are less richly supplied with lymphatics than the vestibular regions of that organ and that the lymphatics of each half of the larynx are relatively independent of one another, some of them are inclined to introduce subdivisions of a confusing character which are rightly rejected by de Santi in his recent paper, to which I would particularly draw your attention.

In all circumstances, however, the broad clinical fact is certain—that cancer occurring in the intrinsic region remains much longer a purely local disease and is therefore amenable to less severe radical treatment than the same form of malignant disease when originating in the extrinsic region. Incidentally I may here perhaps be allowed to remind you that this local difference arising out of the different conditions of lymphatic supply and anastomosis in the different parts of the larynx is not limited to what we observe in malignant disease. Exactly the same conditions obtain in diphtheria. Whilst early considerable implication of the cervical lymphatics forms one of the most conspicuous phenomena of diphtheritic infection when localised in the pharynx and the extrinsic region of the larynx almost the whole intrinsic region might be lined with false membrane without any enlargement of the cervical lymphatics being present at all. The older generation will remember that this very fact was made one of the main arguments against the identity of diphtheria and croup.

I am extremely gratified that with regard to the all-important question just discussed I find myself in complete agreement with the leading authority concerning total extirpation of the larynx, Professor Gluck, who in his latest contribution to the question expresses himself verbatim as follows:[29] "If the anatomical character of the tumour, be it medullary carcinoma or scirrhus, is not without importance for the extent of the operation, the topographical relations according to the anatomical seat of the new growth are especially decisive. In particular, if we consider the region of the neck, every surgeon will nowadays admit that we can obtain in cases of circumscribed cancers—for instance, of the vocal cords—which have been diagnosed in time lasting results by conservative excisions, performed in a healthy neighbourhood. In the case of the pharynx and pharyngeal part of the œsophagus the conditions are quite different owing to the lymphatic supply, and here we should place ourselves *cum grano salis* as a matter of principle on the radical point of view discussed when speaking of cancer of the uterus—i.e., even if the tumour be relatively small extensive operation must be performed if recurrence is to be excluded with any amount of certainty." It is the disregard of these practical facts which has led Dr. Mackenzie to his wholesale demand for total laryngectomy in all cases of laryngeal cancer.

Now let us consider this demand. I am glad, my views on this particular point having on more than one occasion been misunderstood, that I have the opportunity of stating plainly what I think of that operation after having seen a good deal of its immediate and more remote results. Nobody can recognise with greater admiration than I do, gentlemen, what enormous progress has been made in the technique of total laryngectomy since its first inception by Patrick Heron Watson in 1866. The work of Professor Gluck of Berlin in particular must be ranked with the greatest surgical triumphs of our days. When one has seen, as I have, cases of his in which the whole of the larynx with the neighbouring lymphatic glands, part or the whole of the tongue, a large part of the œsophagus, several of the most important nerves and vessels of the neck, have been removed for malignant disease, the patient surviving an amount of interference which seems well-nigh incredible, one can but bow before such achievements, and one must feel deeply grateful that surgical art should have made it possible to prolong life to those victims of the cruel disease who wished to live at any price or who are compelled to do so from higher motives. But, gentlemen, when this ungrudging homage has been given to the merely surgical aspect and when we now come to consider the extremely grave question of the further existence of these patients a deep gulf opens between some of my surgical friends and myself. Professor Gluck, whose surgical achievements are equalled by his warm-heartedness, summarises his views in his recent great paper[30] by saying that "if we can do things in surgery to-day which appeared impossible yesterday we must in the first place consider it the paramount duty of medicine to prolong life," and some followers of his, M. Le Bec and M. Real,[31] note with approbation the following statement made by the same authority last year at Swansea:[32] "First of all, we must seek to prolong the life of our patient. Do not worry too much about his post-operative condition. Restoration of the function is a secondary consideration; the important point is, first of all, to do away with the imminent disease: this is my surgical faith."

Well, gentlemen, whilst willingly recognising that this is a question in which opinions might legitimately differ, I confess that I cannot unreservedly go the length of Professor Gluck's conviction. It is no doubt our duty to prolong life but when he says that we ought not to worry too much about the patient's post-operative condition and that restoration of function is a secondary consideration I firmly maintain that at the time when the question of operation arises the further question ought to be taken into most serious consideration whether the life thus prolonged is worth living. It is one thing to perform a brilliant operation and thereby to prolong a patient's life; it is another to see him a few months afterwards dragging on a most pitiful existence. I do not speak here of the dangers of recurrence, particularly when these tremendous operations are undertaken in advanced cases. Proverbially "beggars are no choosers," and when a man has before him the prospect of certain death within a few months under great sufferings, and, on the other hand, a chance, although remote, of remaining free by submitting to a serious operation I should, *if the post-operative existence could be rendered worth living*, not only consider it legitimate for such an operation to be undertaken, but should strongly advise it. Even if, in such circumstances, a small percentage only of all those afflicted could be saved this would be a gain and if I were the patient myself I should certainly take my chance. But matters, in my humble opinion, are widely different if, in addition to the danger of recurrence, there is that—to my mind extremely sad—after-existence which has to be endured after successful removal. There are certain operations which mutilate not merely the body but, as I expressed it on a previous occasion,[33] "take away a part of human existence." I know of none coming more under that head than total extirpation of the larynx. I shall not indulge in harassing descriptions and lay myself open to the accusation of sensationalism, but, soberly speaking, one must have seen a number of these patients some time after the operation with their difficulty of making themselves understood by other persons, with their difficulty in not a few cases in swallowing, with their total inability of following an ordinary occupation, and one must have witnessed the instinctive horror with which they are looked upon by other people, whereby in addition to their physical disabilities, grave mental distress is caused to the more sensitive amongst these poor patients, to realise what kind of existence it is that has been gained by this prolongation of life.

I may be told that this picture is too gloomy, that the after-existence is not invariably so sad as just described, that some patients were quite content with their lot. I do not doubt this. All I can say is that I have faithfully described the impression which I have received from my personal experience, that this impression is deepening with every fresh case I see, and that I firmly believe that my description applies to the great majority of all cases thus operated upon. Yet, gentlemen, with all this I do not wish it to be understood that I am an opponent of total laryngectomy. Far from it. Quite apart from the fact that I should consider it absolutely unpardonable to force my own opinions upon my patients because they happen to differ in their views of the value of life from my own, there are circumstances in which I should be most anxious to assist them in prolonging their life, however sad the after-existence may be. I have the profoundest admiration for the heroism

[28] See de Santi's paper, The Lymphatics of the Larynx and their Relation to Malignant Disease of that Organ, THE LANCET, June 18th, 1904, p. 1710.

[29] Monatsschrift für Ohrenheilkunde, &c., Nos. 3 and 4, 1904.

[30] Der gegenwärtige Stand der Chirurgie des Kehlkopfs, &c., Monatsschrift für Ohrenheilkunde, 1904, Nos. 3 and 4.

[31] Annales des Maladies de l'Oreille, &c., Janvier, 1904.

[32] Brit. Med. Jour., Oct. 30th, 1903.

[33] Fraenkel's Archiv, 1897, p. 426.

of a man who, fully conscious what will be his lot in the event of a successful termination of the operation, yet wishes to prolong his life for the benefit of those dear to him. Thus a patient might desire to submit to operation because his family would get a pension if he could survive but one year more; thus another might do likewise because he wished to finish a scientific work, or to perfect an invention, the proceeds of which would benefit his family; thus a third, who had insured his life for a certain number of years, might desire to be operated on because in the event of his surviving for another year or two a material increase of fortune would be secured to his family. All these sentiments are simply admirable and considerations as to the kind of post-operative existence undoubtedly must be subordinated to them.

From the foregoing observations I trust you will have seen that I am certainly not an extremist, and I may further tell you that, acting upon my views, I have, in the course of the last year alone, myself sent three patients suffering from advanced malignant disease of the larynx, and in whose cases operative interference had been refused by British surgeons, to Professor Gluck. Even the fact that unfortunately two of them have within a few months after operation developed recurrence would not deter me from consenting to, or even advising on, future operation in similar circumstances. But one thing, gentlemen, I think is absolutely certain—i.e., that such grave operations ought only to be undertaken under two conditions: (1) that the diagnosis was absolutely certain; and (2) in the event of there being no possibility of saving the patient by a less mutilating operation.

With regard to the first of these conditions it is one of the most surprising omissions in Dr. Mackenzie's paper that he should not have referred by one single word to the terrible situation which would be created for both the patient and the surgeon in the event of so serious an operation as that proposed by him being undertaken on the strength of a mistaken diagnosis. I trust I am not an over-sentimental person, but if I had in any of the cases mentioned by me before in which I have myself committed errors in diagnosis advised total removal of the larynx I should be harassed by the recollection of that case to the end of my days. But supposing that the diagnosis of cancer had been positively arrived at, is there really no possibility of saving the patient otherwise than by total extirpation of the larynx with its tributary lymphatics? I hold that to be disastrous teaching. Every case ought to be judged on its own merits, and, above all, Krishaber's classification must be taken into consideration. If a malignant tumour is situated on the posterior wall of the larynx; if the glands on both sides of the neck are already enlarged when the case comes under observation; if, although the disease may have begun as intrinsic carcinoma it has already passed the borders of the intrinsic region, has involved both sides of the larynx, and has infected the cervical lymphatic glands on both sides, no doubt the only chance of possibly saving the patient lies in total removal of the organ with extirpation of the affected and the neighbouring glands. But if the growth when first detected is confined to the intrinsic region, is limited in circumference, and has neither infiltrated the framework of the larynx nor infected the neighbouring lymphatics, practical experience has taught us that it is indeed possible in a large number of cases to save the patient without resorting to the extreme measure of total extirpation of the organ with its tributary lymphatics.

Four methods here come into consideration: intralaryngeal removal, subhyoid pharyngotomy, thyrotomy, and hemilaryngectomy. With regard to the intralaryngeal method, I have unfortunately had to differ on so many points from Dr. Mackenzie that it gives me genuine pleasure to say that at any rate I am at one with him when he says that "operation for laryngeal cancer through the mouth done almost universally to-day, it seems to me should no longer come within the range of serious consideration." I have on more than one occasion, and only last year again at Swansea, expressed myself in a similar sense, and therefore need to-day but briefly summarise the reasons of my objection. I reject intralaryngeal operations in cases of laryngeal cancer—which, by the way, I believe to be not nearly so universally practised as Dr. Mackenzie assumes—not because I deny the possibility of curing a few patients by this method, but because, in my opinion, the game is not worth the candle. I hold that it is a false ambition to claim cases of cancer of the larynx, even if in an early stage, even if circumscribed, even if situated on a vocal cord, as proper objects for intralaryngeal operation, because this method, whilst excellently adapted for the removal of growths from the surface, gives no guarantee whatever for the complete eradication of neoplasms infiltrating the mother soil and of removing a sufficient area of healthy tissue all round the new growth. The adoption of any method which does not permit the surgeon to remove with certainty not only the malignant growth itself, but also a sufficiently large healthy zone round it, is unsurgical, and is a contravention of the general rules of surgery in cancer. A further important consideration is that malignant disease of the larynx when once the organ has been opened is in the great majority of cases found to be considerably more extensive than had appeared to be the case from laryngoscopic examination, and finally, even after an apparently successful intralaryngeal removal of a malignant laryngeal growth, it will be imperative to keep the patient for a very long time under periodical supervision at short intervals in order to detect and, if so, at once to treat apparent recurrence, which, however, in most cases of that kind ought to be more properly called incomplete eradication. Taking all these circumstances into consideration I say with Dr. Mackenzie that operations for laryngeal cancer through the mouth should no longer come into the range of serious consideration.

The second contingency—subhyoid pharyngotomy—can be dismissed in very few words. In malignant disease of the larynx it is only applicable in cases in which the disease is confined to the epiglottis or to the arytæno-epiglottic folds and in which the neighbouring lymphatics have not yet been infected. Apart from the fact that these contingencies are extremely rare the operation in such cases has hitherto been attended, so far as public records go, by singularly large fatality, and although I have lately heard privately that better results have been obtained more recently I am waiting for confirmation of these tidings before I see my way to recommend adoption of this method in cancer of the larynx.

4. But how about thyrotomy? Here we come to the last and perhaps the most extraordinary of Dr. Mackenzie's assertions. As already stated, he unreservedly condemns this operation in the following terms: "Thyrotomy with curettement or removal of all apparent (visible) parts diseased is not up-to-date surgery, is in direct defiance of the rules that should govern us in the treatment of cancer, and is a reversion to, and a resurrection of, a method of procedure that was discredited and abandoned half a century ago." I do not think that my characterising this assertion as "extraordinary" is a bit too harsh when it is contrasted with another enunciation of Dr. Mackenzie pronounced in 1895. In that year, on the occasion of a discussion on cancer of the larynx at the meeting of the British Medical Association in London, Dr. Mackenzie stated verbatim[31]: "I do not wish for one moment to depreciate the value of the removal of laryngeal cancer by thyrotomy. To do so would be to fly in the face of all experience." I do not know what has happened between 1895 and 1900 that has induced Dr. Mackenzie to do in 1900 the very thing which he deprecated in 1895—viz., to fly in the face of all experience. One thing, however, appears to me quite certain, and that is, that if an author not merely completely disregards the practical experiences of trustworthy members of his own profession and sweepingly condemns their procedures but additionally flatly contradicts himself he is bound to give reasons for his sudden change of front instead of mere assertions expressed in a manner which he must have foreseen could not but hurt the feelings of those who had obtained the most satisfactory results by the method which he so unconditionally condemns. But, incredible as it may seem, no reasons whatever are adduced in his paper for the attitude assumed and the suggestions which he made in the discussion of 1902—viz., that "in considering apparent cures from this, as well as other incomplete and therefore hazardous and unsurgical operations, two mighty possibilities should be for ever borne in mind: mistakes in diagnosis and the simple accident of good fortune"—are again not in the nature of proofs but of further assertions and can but add fuel to the flame. I know that Dr. Mackenzie is absolutely incapable of deliberately making a misleading statement, but in speaking of thyrotomy as being not up-to-date surgery, as being in direct defiance of the rules that should govern us in the treatment of cancer, and being a reversion to, and a resurrection of, a method of

[31] Brit. Med. Jour., Oct. 26th, 1895, p. 1035.

procedure that was discredited and abandoned over half a century ago, he none the less creates as wrong an impression in the mind of the uninitiated reader as if he had intended to produce it.

In the introduction to this paper I have reminded you that thyrotomy for laryngeal cancer was in 1878 discredited and subsequently practically abandoned because in those days advanced and therefore *a priori* unsuitable cases were subjected to an operation the technique of which at that time was anything but methodically developed. If 20 years afterwards, with improved technique, that operation has again been resorted to in a class of cases totally different from those in which it has been unsuccessfully employed at a previous period, it surely is not fair to describe a progressive and beneficial development of that character as "a reversion to, and resurrection of, a method of procedure that was discredited and abandoned half a century ago." And when Dr. Mackenzie speaks of thyrotomy as an "incomplete and therefore hazardous and unsurgical" operation, I must say that this description is very unjust. The advocates of thyrotomy take their stand on the bases of the same celebrated dictum of Virchow, which Professor Gluck[35] has quoted as his guiding star: "If cancer be at its commencement and often for a long time a purely local disease, it must be possible to cure it during that period by local treatment." Clinical experience has conclusively proved that intrinsic cancer of the larynx is prominent amongst those forms of malignant disease in which the disease not merely commences as a purely local affection but remains, as a rule, for a comparatively long time limited to its original focus. If during that period its true nature be recognised, and an operation be performed, which not merely removes the tumour itself but a sufficient area of healthy tissue in all directions round it, the patient has a reasonable chance of being lastingly cured. Such an operation is modern thyrotomy as first suggested by Mr. Butlin. 15 years' experience has shown that by its employment the disease can be completely and lastingly eradicated and to describe it as an "incomplete and therefore hazardous and unsurgical" operation is wide of the mark.

The "two mighty possibilities" which Dr. Mackenzie invokes for the explanation of what he calls "apparent" cures—viz., "mistakes in diagnosis and the simple accident of good fortune"—can only raise a smile. Surely Dr. Mackenzie himself cannot seriously believe that not only Butlin and myself, but the whole British school of laryngologists, and additionally Chiari, Schmiegelow, and Moure, should for 15 years have been persistently favoured by the "simple accident of good fortune"? As to the "mistakes in diagnosis," which are advanced as another "mighty possibility," I am unwilling to believe that Dr. Mackenzie could entertain such a low opinion of European pathological experts as to imagine that they should not be capable of diagnosing an ordinary epithelioma—by far the most common form of laryngeal cancer—when the entire growth has been submitted to them after radical operation. But whatever the meaning of his various explanations may be, I think I may assure you that no such wholesale mistakes as those alleged by him have been committed, and as a proof thereof I beg to submit to you the microscopic preparations of 18 cases of my own, in 15 of which I performed thyrotomy, and in one hemilaryngectomy, whilst in the two remaining cases the operations were successfully performed by my friend and former assistant, Mr. Ewen C. Stabb.[36] I should have liked to make the series quite complete and to submit to your inspection specimens of *all* the cases operated upon by me, but it really could not be foreseen, after I had for years made it a methodical practice to demonstrate my cases whenever possible, and often enough years after the operation, before the Laryngological Society of London, together with the microscopic preparations belonging to them, that it could be suggested that "apparent" cures by means of thyrotomy might be due to either good luck or mistaken diagnosis. Thus not in every case of mine have microscopic preparations been preserved. The number of slides, however, shown to-day is, I trust, representative enough to convince anybody who does not deliberately shut his eyes to plain facts that my operations have not been performed on the basis of a mistaken diagnosis.

And now as to the results of the operation so much deprecated by Dr. Mackenzie. Last year at Swansea I reported from my own practice 20 thyrotomies[37] with or without removal of small fragments of cartilage in cases of undoubtedly malignant disease of the larynx, with 19 recoveries, two quite doubtful recurrences, and one death.[38] In two of the cases then reported the operation had been too recently performed to allow one to speak of lasting cures. In one of these cases the patient has remained perfectly well; in the other it was found that the operation had not been extensive enough[39] and a second thyrotomy was performed within two months from the first. After the second operation the patient has remained well. As in both these cases more than a year has now elapsed since the performance of the operation, there being not a trace of recurrence, and as I am firmly convinced from personal experience that no recurrence need be feared if the patient has remained well for a full year after operation, I am now—irrespective of the incomplete operation which had to be repeated—in possession of the notes of 20 thyrotomies performed for undoubted malignant disease of the larynx between 1891 and 1904 with one death, two doubtful recurrences, and 17 lasting cures, bringing the percentage of successful cases in my own practice within that period up to 85 per cent.

I state these results with a feeling not of vaingloriousness but of deep and sincere thankfulness that I have been privileged to preserve a number of valuable lives by an operation the character of which is little dangerous, and the results of which allow the patient not merely to live on but to lead a life in all respects worth living. In this connexion it deserves particularly to be mentioned that the great majority of cases have regained a surprisingly good, although, of course, more or less husky voice, and that in a few cases only have their vocal powers been reduced to a whisper. Out of the 17 patients who permanently recovered from the operation three died several years afterwards from affections altogether unconnected with the original disease: one, six years after operation from an acute abdominal affection; the second, three and a quarter years afterwards from embolism of the heart or lungs; and the third, four years afterwards from pneumonia. The remaining fourteen are all alive and well, as I have ascertained only recently by renewed inquiry. My oldest successful thyrotomy now dates back to June 2nd, 1891—i.e., more than thirteen years ago, and I have other patients living, and in good health, in whom the operation was performed twelve, ten and nine years ago. In addition to the 20 cases just named, I have performed three further thyrotomies in the course of the present year. All three patients have made an excellent recovery. In one of them, however, in which the patient had, in spite of my urgent advice, unduly postponed the operation, recurrence has, unfortunately, taken place, and I have had to perform partial laryngectomy on the eve of my departure for America. The other two cases are of too recent date to be included as yet in the class of permanently cured cases.

It appears to me that no better reply could be given to Dr. Mackenzie's contention than the plain and well-authenticated facts which I have just stated to you. I have nothing to add to my former descriptions[40] concerning the technique of the operation, except that in my last four operations I have used with great advantage the excellent shears, which I am showing here, invented and recently described by my friend, Mr. Ernest B. Waggett,[41] for the purpose of cutting through the ossified thyroid cartilage.

From the foregoing facts it will not surprise you if I most warmly recommend the performance of thyrotomy in suitable cases of intrinsic laryngeal cancer. But in doing so permit me, gentlemen, to submit to you two serious words of warning. Already once before I said[42]: "Thyrotomy with simple removal of soft parts has been discredited by being expected to do impossibilities. I would not like this fate to be repeated through my fault." I stated this with special reference to the necessity of extending thyrotomy

[35] Monatsschrift für Ohrenheilkunde, 1904 (Reprint, p. 28).

[36] These two cases are *not* counted amongst my own thyrotomies.

[37] Brit. Med. Jour., Oct. 31st, 1903.

[38] I take this opportunity to correct a slip of the pen which I just find is committed in my paper published in Fraenkel's "Archiv" in 1897. It is stated there (p. 412) that I had lost "two" patients from thyrotomy performed by myself. On reference, however, to my original article (loc. cit.) it will be seen that one of those cases (Case 6 of the tables) was not one of thyrotomy but of partial extirpation of the larynx.

[39] Transactions of the Laryngological Society of London, December, 1903.

[40] THE LANCET, loc. cit., Fraenkel's Archiv, 1897.

[41] Transactions of the Laryngological Society, April, 1904.

[42] Therapie der Gegenwart, April, 1899.

into hemi-laryngectomy if in the course of the operation it should be found that the disease was more advanced than had been concluded from mere laryngoscopic examination. Nevertheless, I am afraid that this warning has not been universally taken to heart. Last year at Swansea I referred to eight cases of thyrotomy reported on the occasion of the Madrid International Medical Congress by Dr. Botella from Professor Cisneros' clinic. In no less than six of these cases recurrence had taken place from within one month to two years after operation. Whilst being unable in the absence of details of the cases to give a satisfactory explanation of this astounding record of failures, I suggested that there must have been something wrong with either the selection of the cases for thyrotomy or with the technique of the operation itself. Since then Professor Cisneros has published a paper[43] on Thyrotomy in Laryngeal Cancer in which he states (p. 315) that he treats pedunculated tumours which are situated on the border of a vocal cord and which do not impede or at any rate completely paralyse the movements of that cord by intralaryngeal treatment, whilst he performs thyrotomy in cases of tumours implanted on the whole or greater part of a vocal cord with *complete paralysis of the latter* (the italics are my own).

From this description it appears to me that Professor Cisneros treats those cases which I would treat by thyrotomy by means of the intralaryngeal method and performs thyrotomy where I, in the majority of cases, would probably perform hemi-laryngectomy. For when a vocal cord is completely fixed—this, I think, is what he means by speaking of "complete paralysis"—the presumption seems justified that the infiltration had already extended very deeply. Want of success of simple thyrotomy when performed in such circumstances is not surprising. Permit me, therefore earnestly to repeat my advice that thyrotomy should be performed only when the new growth is still limited to the intrinsic region of the larynx, is still circumscribed, is not too extensive, and does not infiltrate too deeply, and that in such circumstances a sufficient zone of healthy tissue should be included in the area to be removed *everywhere* in sufficient distance from the new growth. Should it be found, in the course of operation in a case which seemed on laryngoscopic examination to fall under this category, that the disease is more extensive than had been presumed from laryngoscopic appearances, the operator must not hesitate to extend his operation into hemi-laryngectomy, or if both sides of the larynx should be involved into total extirpation. It is only by the observance of this cardinal rule that thyrotomy will gain the place which is due to it amongst radical operations for cancer of the larynx.

The second request I have to make is this: whilst thyrotomy is still on its trial everywhere except in Great Britain let me ask you to proceed strictly on the lines suggested by Mr. Butlin and myself. I do not believe in the finality of our present technique, and I willingly admit that it may be possible, when once thyrotomy has everywhere gained its place amongst recognised operations for laryngeal cancer, to improve upon the method of operation by means of which we have obtained such satisfactory results. But whilst the operation is still on its trial do not complicate matters by prematurely introducing modifications. I am more particularly induced to make this observation because during a very recent discussion of this question[44] it has been suggested to omit altogether tracheotomy and the introduction of a tampon cannula in the course of the operation. I am not at all inclined to dispute that at some future period this suggestion may be successfully carried out. As matters stand, however, at present it ought to be remembered that every failure will, without consideration of its special cause, be laid at the door of the method itself, whilst thyrotomy is fighting for its very existence. If, on the other hand, you will proceed exactly on the lines suggested by Mr. Butlin and myself, with regard to both diagnosis and technique, I firmly hope that in the near future we shall hear of similarly good results being obtained in America as it has been the privilege of British laryngologists to report during the last 15 years. I may perhaps be permitted here, speaking before an American audience, strongly to repeat a former recommendation of mine[45]—i.e., that only chloroform, not ether, should be employed in these operations. Their one real danger consists in complications on the part of the respiratory organs and every irritation of these parts should therefore be strictly avoided. That it is the tendency of ether to produce such irritation is known to everybody. I am induced to make this observation because I have learnt from Dr. J. Solis Cohen that ether narcosis is almost exclusively used in the United States in these operations.

The only remaining operation to be discussed is hemi-laryngectomy, or partial extirpation of the larynx. Already last year at Swansea I expressed my conviction that partial extirpation of the larynx will come to be more rarely performed in proportion to the diagnosis of malignant disease being arrived at more and more early, when thyrotomy will suffice. It should, in fact, only be employed when the disease is found to be too advanced and too deeply infiltrating to be eradicated by thyrotomy with removal of soft parts only. That, in such circumstances, its results are not likely to be so satisfactory as those of thyrotomy in early stages is obvious; the disease having been so much longer in existence there is reason to fear that it may no longer be purely local and that metastasis may already have occurred. My own experience, limited as it is, bears out that consideration. I have only performed four hemi-laryngectomies. In one case, the patient, as previously reported, died 24 hours after the operation from ether poisoning, the anæsthetic having been administered per rectum. In the second case, a year and a half after the operation, the cervical lymphatic glands above the clavicle, *not* those in the immediate neighbourhood of the larynx, were found to be enlarged and there was evidence of infection of the mediastinal glands. The patient is still alive, but going downhill, and the fatal end, I am afraid, will not long be delayed. In the third case the patient remained free for fully four years after the operation, but then began to expectorate blood and died with unmistakable symptoms of cancer of the liver, whilst there was at the same time dulness at the base of the right lung. In that case the cervical lymphatic glands remained perfectly free throughout. The fourth case is, as previously stated, of quite recent date. In view of the possibility of a development, such as occurred in my second case, I should not offer any objection to extirpation of the corresponding lymphatic glands even if apparently unaffected in cases of hemi-laryngectomy for cancer, although, as my third case shows, even that measure, when once metastasis has actually occurred, does not give the patient a guarantee against recurrence. That such extirpation should, as a matter of duty, be performed in cases of hemi-laryngectomy if the glands are in the least shotty or visibly enlarged goes without saying, but in such cases the prognosis anyhow is unfortunately very doubtful.

And now, gentlemen, I am at the end of my task. I have, as promised, nailed my colours to the mast of practical experience as against theoretical possibilities. At the same time I trust I have succeeded in showing you that the principles upon which my views are based are not purely empirical, and are in all points in concord equally with the experiences of practice and with the achievements of science. Let me summarise, then, what I have endeavoured to establish under the form of the following theses, which may serve as a basis for the discussion which I understand is to follow the reading of this address.

1. It is of the greatest importance that the diagnosis of laryngeal cancer be made at the earliest possible moment. For this purpose it is most essential that the still prevailing notion—viz., that malignant disease of the larynx is from the first attended by all sorts of grave constitutional symptoms—be completely eradicated and that the attention of the general practitioner should again and again be drawn to the fact that there are no more promising cases for radical operation than those in which the disease is at first manifested by nothing else than by obstinate hoarseness, occurring, without any apparent cause, in middle-aged and elderly persons.

2. Clinical diagnosis arrived at from the history and subjective symptoms of the case, from laryngoscopic examination, from accessory circumstances of importance, such as the patient's age, &c., has reached a certain degree of perfection, and enables us in a good many cases to make a correct diagnosis at an early stage of the disease; it is, however, by no means absolutely perfect, and occasional mistakes occur even in the practice of those most experienced.

3. In these circumstances clinical diagnosis ought, whenever possible, to be confirmed before radical operation of any

[43] Bolletin de Laringologia, May-June, 1904.
[44] Centralblatt für Laryngologie, January to April, 1904, Briefkasten.
[45] Fraenkel's Archiv, 1897.

kind is undertaken, by the intralaryngeal removal and microscopic examination of a fragment or fragments of the new growth. This, however, should only be done if the patient previously consents to immediate radical operation being undertaken in the event of the microscope confirming the clinical diagnosis. Should this be the case the practitioner's position will have been materially strengthened. The microscope, however, is by no means infallible in these cases. Should its evidence be negative or inconclusive the intralaryngeal removal and microscopic examination of fragments should either be repeated, if necessary, several times, or, if the clinical symptoms do not warrant postponement, exploratory thyrotomy should be undertaken.

4. The intralaryngeal method is from its very nature unsuitable for the radical removal of malignant new growths of the larynx.

5. Subhyoid pharyngotomy, apart from being applicable in a very small number of cases only of malignant disease of the larynx, is still *sub judice* with regard to its advisability in such cases.

6. Thyrotomy, if undertaken in suitable cases, and at a sufficiently early period, and if performed on the modern lines which experience has shown to be successful, is a perfectly ideal operation in intrinsic cancer of the larynx.

7. Hemi-laryngectomy comes into question only when it is found after opening the larynx that mere thyrotomy will not suffice. When performed it may be accompanied by removal of the tributary lymphatics, even if apparently not diseased.

8. Total laryngectomy should be exclusively reserved for extrinsic, and for those cases of intrinsic, cancer, in which both sides of the organ are affected, and in which the disease has proceeded too far to be eradicated by milder measures. When performed it should be accompanied by the removal of the laryngeal lymphatics on both sides of the neck.

If the adoption of these principles should meet with your approval, gentlemen, there will be an end to the deplorable schism which has of late separated the surgeons and laryngologists of various countries with respect to the diagnosis and treatment of malignant disease of the larynx, and we may justly hope that in striving shoulder to shoulder we shall advance science and benefit our patients.

THE RED LIGHT TREATMENT OF SMALL-POX: A REPLY.

BY THE LATE NIELS R. FINSEN,
COPENHAGEN.

IN THE LANCET of July 30th, p. 287, Dr. T. F. Ricketts and Dr. J. B. Byles have published 13 cases of small-pox which they have treated in red light without obtaining favourable results. From this experience they think themselves entitled to draw the conclusion that this method of treating the disease is ineffective and that the great number of medical men who have published favourable results have been mistaken. Although I should like to enter thoroughly into their paper I am obliged from illness to restrict myself to a few short observations.

It is well known that the red light treatment of small-pox is based on the fact that the small-pox infection puts the skin in a state of great sensibility to light, which also, we know, in normal circumstances may act on the skin as an irritant. It is no unique phenomenon. The same thing is, for instance, known from the buckwheat disease in cattle. Furthermore, the recent researches on the phenomena of fluorescence and sensibilisation seem to supply important contributions to the explanation of this remarkable fact. In small-pox the infection, as is well known, produces a more or less strong exanthem all over the body. If now the patient *during the period of the appearance and the growth of the exanthem* is protected against daylight—especially against the chemical rays—by means of a red light treatment, the exanthem will be less strong than otherwise and, as a rule, no suppuration will occur. If, on the contrary, the patient is allowed to remain lying in bright daylight suppuration will often occur, light acting as "a plus" which increases the already existing inflammation of the skin. It is impossible, of course, to give any absolute rule as there are many degrees of small-pox exanthemata. In many cases no suppuration occurs although light is not shut out.

It will thus be seen that the shutting out of light acts differently in different cases according to the extension and force of the exanthem. Now, experience shows that if a patient is placed in red light or in darkness *immediately after the first appearance of the exanthem* no suppuration will, as a rule, occur, even in unvaccinated cases or in cases with confluent exanthem. But if the patient is put under treatment later the result will be more doubtful. It will depend, of course, on the strength of the exanthem and on the length of time light has been allowed to exercise its irritating action. Experience shows further that even a relatively short exposure to light, especially if the exanthem is fully developed, suffices for the production of suppuration. Pursuant to these facts the following two conditions are indispensable in order to obtain good results from the red light treatment: (1) an early treatment of the patient and (2) an entire exclusion of hurtful rays of light. With regard to the time when the treatment should begin I wrote as follows in 1895:[1] "When the patients come under treatment early enough—*before* the fourth or fifth day of the disease—suppuration of the vesicles will be avoided"; and, "Should the patient come under treatment after the fifth day of the disease it is uncertain whether the suppuration can be avoided; sometimes this is the case, sometimes not."[2]

This statement is sufficiently clear. But what do we see when examining Dr. Ricketts and Dr. Byles's 13 patients? According to the table given by them their patients have come under treatment at the following periods. One patient on the fourth day of the disease, seven on the fifth day, three on the sixth day, and two on the seventh day. Moreover, the majority of the 13 cases mentioned were severe and serious ones, all of which, no doubt, should have been placed under treatment on the fourth day. So it is evidently no wonder if Dr. Ricketts and Dr. Byles have had none but bad results from the treatment. Nothing else could be expected. I therefore protest against them attributing to their tests any general importance for the appreciation of the method, and against their conclusion that the method is ineffective and that the great number of medical men of all countries who have obtained good results are mistaken. Though I thus, for the sake of the cause, am obliged to protest against their conclusion, I do not want in any way to disparage their researches, for it appears that they unfortunately have started from wrong premisses. In fact, they say somewhere in their paper: "Dr. Finsen claims that suppuration is prevented if the treatment is begun before suppuration is imminent. This condition was fulfilled in all our cases." I never said anything of the kind. My exposition as given above shows that I could not possibly have said so, as such a statement is entirely inconsistent with the theory of the method. This misunderstanding also appears elsewhere in the following statement: "There remain 13 cases in which the patient was treated in red light throughout the period of suppuration." It will be seen from my exposition that in order to be of any use the treatment must, on the contrary, be carried out *before* the period of suppuration.

POSTSCRIPT.

Professor Finsen wrote the above article a few weeks before his death. His increasing illness prevented him from publishing it. Recollecting it, however, shortly before his death he expressed his wish to have it published. It was in his proposal to treat small-pox patients in rooms from which the chemical rays of daylight are shut out and in the *rationale* of this method that Finsen's genius burst forth beyond all question. Afterwards he devoted most of his time and energy to researches on the beneficial action of light—"the positive light treatment"—but still he constantly and with the keenest interest followed any clinical report on results with the red light treatment of small-pox. The above article, the last from his hand, shows that he to the end maintained an unshaken confidence in the therapeutic value of this method.

HOLGER FORCHHAMMER.
GUNNI BUSCK.

Finsen Medical Light Institute, Copenhagen.

[1] Brit. Med. Jour., Dec. 7th, 1895.

[2] This holds good in small-pox epidemics of a relatively benign nature. In more severe cases it will, as a rule, be necessary to place the patients under treatment on the fourth day of the disease at the latest.

ON THE SERUM THERAPEUTICS OF CASES OF SNAKE-BITE.

BY GEORGE LAMB, M.D. GLASG.,
CAPTAIN, I.M.S.; ASSISTANT DIRECTOR, PASTEUR INSTITUTE OF INDIA.

FOR some time now it has been fully established that an animal which has been treated over a length of time with the venom of a poisonous snake, such as the cobra, yields a serum which is antitoxic towards that poison. It is unnecessary for our present purpose to enter into the many questions of scientific interest which surround this subject; I intend to confine my attention entirely to certain points which must be settled definitely before any method of treatment based on this discovery can hope to take its place among recognised therapeutic measures. The first question, then, which I propose to consider is that of the specificity of antivenomous sera, a question which in this connexion is evidently of the greatest importance. Let us deal with the work on this subject in more or less chronological order. Dr. Calmette of Lille[1] was the first to produce an antivenomous serum in sufficient quantity for therapeutic purposes. This serum was prepared with a mixture of snake venoms, in which mixture, however, cobra poison greatly preponderated. He claimed that this serum was active against the venoms of all species of snakes, a claim based on the conception that all snake venoms are alike in physiological action and only differ from one another in their degree of toxicity. On further experiment this claim was soon seen to be without foundation. Thus it was shown by Martin of Melbourne[2] that Calmette's serum was unable to preserve animals against injections of the poison of the Australian tiger snake (hoplocephalus curtus). Subsequent experiments in Sydney demonstrated a like fact as far as the poisons of other Australian snakes were concerned. In India I[3] conclusively showed that the Lille serum, while active for cobra venom, had no neutralising effect for the poisons of the following snakes: daboia Russellii, bungarus fasciatus, and echis carinata. Dr. F. Tidswell of Sydney[4] next pointed out that Calmette's serum, inasmuch as it was prepared with a mixture of snake venoms, was not strictly adapted for the settlement of the question of specificity, and that it was necessary for this purpose to possess a serum prepared with one single kind of venom and to test its efficacy against the same and other kinds of venom. He therefore immunised a horse with the pure venom of hoplocephalus curtus. With the same end in view I have immunised horses with pure cobra venom. The observations[5] which have been made by Dr. Tidswell and myself with these two sera have already been published in full. A brief summary of the results of these observations, as far as the general actions *in vivo* of the various venoms are concerned, is as follows:—

1. The serum of the horse immunised with hoplocephalus poison was found to be active for the corresponding venom. It completely failed to neutralise the poisons of three other Australian snakes—namely, the brown and black snakes and the death adder. Further, this serum in India was found to be quite inactive against the venoms of the following snakes: cobra, king cobra, bungarus cœruleus (krait), bungarus fasciatus (banded krait), enhydrina valakadien (common sea snake), Russell's viper, echis carinata (phoorsa), trimeresurus gramineus (green pit viper), and crotalus adamanteus (Californian rattlesnake).

2. The serum of a horse immunised with pure cobra venom is strongly antitoxic for the venom used in its preparation; in large quantity it has a slight neutralising power for the venom of enhydrina valakadien; further, it delays death in cases of intoxication with the venom of the king cobra, a species belonging to the same genus as the cobra; it does not, however, completely neutralise this poison, even when used in large quantities. The antitoxic effect against these two venoms is so slight that this serum would be of little or no therapeutic use in cases of bites from these snakes. Finally, this serum has no neutralising action on the venoms of the two colubrine snakes, bungarus cœruleus and bungarus fasciatus, or for the venoms of the following viperine snakes—daboia Russellii, echis carinata, trimeresurus gramineus, and crotalus adamanteus.

It would appear from these observations that the question of specificity was definitely settled. But lately Calmette[6] has made a statement which, however, he does not support by any experimental data. While now admitting that all snake venoms are not alike in physiological action this worker holds that a serum prepared with a venom, such as cobra poison, which is rich in neurotoxic element will neutralise all other venoms which owe their lethal effect to an action on the nervous tissues: in other words, that the neurotoxic elements of all venoms possess the same haptophore groups. In an analogous manner he argues that all viperine venoms which consist principally of "hæmorrhagin" will be neutralised by a serum prepared with a single venom rich in this substance, such as daboia venom. These suppositions of Calmette would appear to receive some support from Rogers's experiments[7] with the serum prepared at Lille. This observer states that this serum neutralised cobra venom well; that when used in large amount it acted next best against the venom of the king cobra and only a little less so in proportion to its toxicity against the venom of enhydrina valakadien. In the case of the krait its action was much more feeble, although still distinct; while in that of the banded krait it prevented all colubrine symptoms. These results, however, were not confirmed by Elliot[8] working in Sir T. R. Fraser's laboratory in Edinburgh. He found that a sample of Calmette's serum which proved definitely antagonistic to cobra venom exerted only a very feeble action against the venom of enhydris curtus and that it was quite powerless to protect animals against ten minimum lethal doses of the venom of bungarus cœruleus. It is to be noted, however, that Rogers used relatively very much larger quantities of serum than did Elliot. It is also to be remembered that all these observations were made with a serum prepared with a mixture of venoms, a serum, as has been pointed out, by no means suitable for the settlement of specificity. However, the results mentioned above, which have been obtained by Tidswell and myself with sera prepared with two pure venoms, show that Calmette's statement requires considerable modification, inasmuch as it was shown that cobra antiserum, when used in large quantity, had only a very slight neutralising effect on the venoms of the king cobra and of enhydrina valakadien and no action at all, if used in a relatively large amount, on the poisons of two species of bungarus, all four colubrine snakes which owe their lethal effects principally, if not entirely, to their actions on the nervous tissues. Analogous results were obtained with the serum prepared with the poison of hoplocephalus curtus, which serum, Tidswell found, had no action on the venom of pseudechis, a poison which Martin[9] has shown has a physiological action absolutely similar to that of hoplocephalus curtus. Further, when we come to test *in vitro* a pure antiserum against the hæmolytic actions of the various poisons we find that specificity is well marked, although not absolute. Thus I have shown[10] that cobra antiserum in this respect has a high neutralising effect for its homologous venom, that it prevents, when used in relatively large amount, this action of the venom of bungarus cœruleus, but that it has no hindering effect at all on the hæmolysing actions of eight other venoms, amongst which was the poison of the king cobra, a species belonging to the same genus as the cobra. Very similar results were obtained with Tidswell's serum, which, however, proved not quite so specific in its action as the serum prepared with cobra venom. Further, both these pure antisera were tested *in vitro* against the actions of the various poisons on the blood coagulability. Without entering into any details of these experiments, I may mention that here also specificity was well marked. Thus cobra antiserum neutralised cobra venom but not king cobra venom, and hoplocephalus antiserum neutralised its homologous poison but not three other poisons which act like it as powerful fibrin ferments.

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[1] Le Venin des Serpents, Paris, 1896. Notice sur le Sérum Antivenimeux et sur le Traitement des Morsures de Serpents, Lille, 1901.
[2] Intercolonial Medical Journal of Australasia, August 20th, 1897. Ibid., April 20th, 1898.
[3] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New series. No. 5, 1903.
[4] Australasian Medical Gazette, April 21st, 1902, p. 177.
[5] Ibid. Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New series. No. 5, 1903; No. 10, 1904.
[6] Comptes Rendus de l'Académie des Sciences, 1904, tome cxxxviii., p. 1079.
[7] Proceedings of the Royal Society, vol. lxxii., p. 419; THE LANCET, Feb. 6th, 1904, p. 349.
[8] THE LANCET, July 16th, 1904, pp. 141 and 142.
[9] Royal Society of New South Wales, July 3rd, 1895, Journal of Physiology, vol. xv., No. 4, 1893.
[10] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New series. No. 10, 1904.

In a recent paper Rogers[11] has put on record an extension of his previous observations. Using a serum prepared in London by Messrs. Burroughs and Wellcome with pure cobra venom, he finds that king cobra venom was completely neutralised by this serum. He does not, however, mention the number of lethal doses used or the quantity of serum which was required to effect their neutralisation. He further mentions that with this same serum and the venom of bungarus cœruleus he obtained similar results to those which he had previously obtained with Calmette's serum. Here, again, he does not mention the number of lethal doses used or the amount of serum which was required to effect neutralisation. It would appear, therefore, from all these observations that an antivenomous serum is highly but not strictly specific—a conclusion at which I arrived in my last paper on the specificity of antivenomous sera. In support of this conclusion and of the falseness of Calmette's conceptions are the recent experiments of Noguchi,[12] published as I write. This observer, working with antisera prepared for the venoms of crotalus, mocassin, and cobra, showed that a given dose of anticobra serum protected against five minimum lethal doses of cobra venom when tested on the guinea-pig, against only one of water mocassin venom, and was quite ineffective against crotalus venom; and further, that a given quantity of anticobra serum neutralised two minimal hæmolytic doses of cobra hæmolysin *in vitro* and had no antihæmolytic action against crotalus and mocassin hæmolysins, and so on through the remainder of the cross actions. From the results of his experiments Noguchi concludes that the action of antivenenes is highly, if not strictly, specific both *in vivo* and *in vitro*.

The bearing which these results have on the problem of the serum therapeutics of cases of snake-bite is very evident, for at the very outset we are met with the almost insurmountable difficulty that only the specific antiserum must be used in any case of snake-venom intoxication. In this connexion I have already[13] pointed out that for India alone we should require at least six different antivenenes—namely, sera for the venoms of the cobra, the king cobra, the krait, the banded krait, the daboia, and the phoorsa (echis carinata). In the first place, it seems almost impossible to collect these various venoms in quantities sufficient for the purpose of immunisation of large animals. For the last four years arrangements for the collection of venoms, backed by the Government of India and complete in every detail, have been working in the laboratory in Bombay. Even under these most favourable conditions only a very small and quite insufficient amount of these venoms, except cobra and daboia, has been collected. In the second place, granted that it was possible to prepare sera for these different poisons, the practical use of them would be beset with difficulty. For when a person, especially a native of India, is bitten by a snake he is rarely able to tell the species of snake which has inflicted the bite. And, further, as an antivenomous serum to be of much practical utility must be injected before any symptoms of intoxication have set in, the medical man who is called on to treat a case of snake-bite with antitoxin is not as a rule in a position to form an opinion, either from the history of the case or from the symptoms, as to the nature of the venom which has been injected. He would have, therefore, either to use one of the antitoxic sera at haphazard or to inject the whole of them at once, neither of which methods would commend itself as a trustworthy or scientific therapeutic measure.

Having pointed out how the question of the specificity of antivenomous sera influences the practical therapeutics of cases of snake-bite we may now pass to some other and very important points. It has been shown that Calmette's serum has a certain neutralising effect on cobra venom. Further, as I have mentioned above, by using pure cobra venom I have prepared a serum practically specific for this poison. The question, then, of the therapeutic application of these two sera in cases of cobra-bite is at once raised. In this connexion we have first to consider the amount of serum which would have to be injected in order to save the life of a man bitten by this snake. Now a moment's consideration will show that in order to arrive at an accurate therapeutic dose of an antivenomous serum three factors must be determined: (1) the neutralising power of the serum—that is to say, the exact amount of serum which can neutralise a given amount of venom; (2) the amount of poison which the snake has injected; and (3) the quantity of venom the injection of which a man can survive—namely, the maximum non-lethal dose for an ordinary man. It is, of course, apparent that only the first of these factors can be determined with any accuracy. As regards the second it is evident that in treating any case of cobra bite one should always assume that the snake has injected the maximum quantity of venom possible. An estimation of this amount can be arrived at by experiment. The third factor, as we shall see later, is almost negligible. However, an estimation of the probable minimum lethal dose for man may be formed by analogy with that for animals of various species. We shall now consider in detail these three points.

The method of standardisation of the sera which I have adopted in all experiments is based on the conception, now generally acknowledged to be true, that the antagonism between toxin and antitoxin is of the nature of a chemical reaction and is quite independent of vital activity. The sera were tested in every case against ten lethal doses of venom and allowance was made for the amount of poison which the animal could itself deal with. The mixtures of serum and venom were made *in vitro* and allowed to stand at room temperature for half an hour before injection. Working in this way along with Dr. W. Hanna[14] I showed that one cubic centimetre of Calmette's fresh serum was able to neutralise 0·73 milligramme of pure cobra venom. I have now immunised four horses with pure cobra venom, two with unheated poison, and two with venom which had been heated for half an hour at 72° C. These horses have been under treatment for periods varying from three to one and a half years. In each case the serum has been accurately tested at intervals. As with diphtheria toxin immunisation, the results have varied considerably. They have shown that some horses yield a much stronger antitoxin than others, that after reaching a certain strength the serum begins to deteriorate, and that further injections of large amounts of venom have no effect in again increasing its antitoxic power. It is unnecessary for our present purpose to go into the details of these experiments. It is sufficient to note that the serum of highest antitoxic value which I have been able to procure was got from a horse treated for about two years with pure unheated cobra venom. Of this serum one cubic centimetre was able to neutralise 1·5 milligramme of pure cobra venom. As a rule, however, the strength of the different sera was somewhat lower than this. We may take it that an average strength would be one of which one cubic centimetre of serum was able to neutralise about one milligramme of venom, and for practical purposes it seems expedient not to depend on being able to prepare, under the present methods of immunisation, a serum of greater potency than this average. Further, it has to be noted that all my tests were carried out with perfectly fresh sera. Now I have shown[15] along with Dr. Hanna that antivenomous serum undergoes a progressive and fairly rapid deterioration in hot climates, and that this deterioration is greater and more rapid the higher the mean temperature to which the serum is subjected. It is evident, therefore, that the dose of serum would have to be increased in proportion to the time it had been kept and to the temperature to which it had been subjected.

The second factor—namely, the amount of venom which a cobra can inject—is, as I have said, one which can be determined by actual experiment. While Cunningham[16] has estimated this amount on the average at 254 milligrammes, Calmette in his book entitled "Le Venin des Serpents" gives 48 milligrammes as the maximum quantity which he was able to procure from a naja haje of about five feet long. To settle definitely this point I have made three series of experiments. In each series several cobras which had just been captured were weighed and the poison extracted by squeezing the gland secretion into a weighed watch-glass. The poison was then thoroughly dried over lime until a constant weight was obtained. The average amount of dried venom procured from each snake was then calculated. In order to ascertain the effect of captivity on the weight of the snakes and on the amount of venom secreted similar estimations were made at each extraction, which took place at intervals of about a fortnight. After each extraction the

[11] Indian Medical Gazette, September, 1904, p. 332.
[12] Brit. Med. Jour., Sept. 10th, 1904, p. 580.
[13] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New series. No. 5, 1903.
[14] Ibid. No. 1, 1902.
[15] Loc. cit.
[16] Scientific Memoirs by Medical Officers of the Army in India, 1895, Part ix., p. 5.

snakes were fed by means of a funnel passed down into the œsophagus with egg beat up in milk. The following tables show at a glance the results which were obtained.

Experiment I.

Date.	Number of snakes.	Average weight of snakes in grammes.	Average amount of dried venom per snake in grammes.
11.12.01	5	1092	0·240
18.12.01	5	1118	0·108
8.1.02	5	1096	0·180
22.1.02	5	1070	0·187
5.2.02	5	1044	0·253
*19.2.02	4	927	0·133
†5.3.02	3	748	0·080
19.3.02	3	729	0·095
‡2.4.02	2	669	0·080
23.4.02	2	639	0·018
8.5.02	2	697	0·042
22.5.02	2	634	0·031

* Snake, weight 1440 grammes, had died. † Snake, weight 1459 grammes, had died. ‡ Snake, weight 870 grammes, had died.

Experiment II.

Date.	Number of snakes.	Average weight of snakes in grammes.	Average amount of dried venom per snake in grammes.
13.12.01	3	791	0·182
20.12.01	3	808	0·184
8.1.02	3	743	0·238
22.1.02	3	726	0·249
*5.2.02	2	650	0·299
19.2.02	2	672	—
5.3.02	2	655	0·299
19.3.02	2	710	0·254
2.4.02	2	680	0·181
23.4.02	2	620	0·052
8.5.02	2	695	0·051
22.5.02	2	680	0·045

* Snake, weight 235 grammes, had died.

Experiment III.

Date.	Number of snakes.	Average weight of snakes in grammes.	Average amount of dried venom per snake in grammes.
16.12.01	6	585	0·248
23.12.01	6	588	0·109
9.1.02	6	592	0·203
23.1.02	6	586	0·167
6.2.02	6	544	0·147
*20.2.02	5	537	0·098
†6.3.02	4	503	0·114
20.3.02	4	483	0·048
‡3.4.02	3	465	0·039
§24.4.02	1	495	0·119
8.5.02	1	415	0·047

* Snake, weight 495 grammes, had died. † Snake, weight 720 grammes, had died. ‡ Snake, weight 450 grammes, had died. § Two snakes, weight 520 and 320 grammes, had died.

From these tables it is seen that when cobras are kept in captivity and the poison extracted regularly there is an almost progressive loss of weight and also an almost progressive diminution in the amount of poison secreted. This latter fact no doubt explains the low estimate which Calmette has made of the amount of venom which a snake can inject. In the experiments collated above the poison was squeezed out by firm pressure with the finger and thumb over the glands. Inasmuch as in nature no such artificial assistance is given to the ejection of the venom an objection might be brought against these estimations. When, however, we consider the perfect mechanism by means of which a cobra naturally empties its poison glands the question at once suggests itself as to whether squeezing the glands really yields as much poison as the snake can itself eject. This point was put to practical experiment. Three fresh full-grown cobras, of an average weight of 1228 grammes, were allowed to bite through a sheet of rubber stretched over a weighed watch-glass. The amount of dried venom got in this way was then determined. A total quantity of 1·12 grammes was obtained—that is, an average of 373 milligrammes from each snake, an amount considerably greater than that got in any of the three experiments detailed above. For our present purpose these observations may be summed up as follows: from 14 fresh cobras of good size an average amount of 231 milligrammes of dried venom per snake was got by squeezing the glands; from three fresh cobras an average amount of 373 milligrammes was obtained by allowing the snake to bite. Rogers[17] has recently confirmed these experiments, which were done nearly three years ago. He found that the average amount of dried poison got from two full-sized cobras was 249 milligrammes. It is quite evident, then, from these observations that in estimating the dose of antivenomous serum to be used in the treatment of any case of cobra bite one should always have in mind the fact that the snake may have injected as much as from 250 to 350 milligrammes of poison, for the neutralisation of which quantity sufficient serum would have to be injected if one wished to save the life of the patient. There must be, of course, many cases in which less, probably a good deal less, venom would be injected and in such cases a smaller amount of serum would suffice. But the difficulty arises in there being no means by which one could judge of this and as treatment must be immediate there is no time to wait and watch the development of the case.

We have now to consider briefly the third factor which bears on the determination of a therapeutic dose of anti-cobra serum in a case of cobra-bite. Fraser[18] has estimated that the minimum lethal dose of cobra venom for an average man would be about 31 milligrammes, while Calmette's[9] estimation is 10 milligrammes. I have now accurately determined the minimum lethal dose of this poison for animals of different species and of different sizes. The results are contained in the following table.

Minimum Lethal Dose of Dried Cobra Venom per kilogramme of weight in milligrammes.

—	Rat.	Rabbit.	Dog.	Monkey.	Horse.
Cobra venom in milligrammes	0·33	0·35	0·5	0·25	0·09

From this table it is seen that the horse, weight for weight, is the most susceptible of the animals experimented with and the monkey the next most susceptible. If, then, the susceptibility of man be at all analogous to that of the monkey we can calculate that the minimum lethal dose for a man of from 60 to 70 kilogrammes weight would be from 15 to 17·5 milligrammes, an estimate between those of Calmette and Fraser. We may therefore take it that a man would probably be able to survive about 15 milligrammes of cobra venom, an amount almost negligible if the snake had injected the maximum amount of poison possible.

Having as far as is possible experimentally determined the three factors on which the dose of serum to be used in any case of cobra bite rests we have now only to calculate what this dose would be. In a previous communication[10] along with Dr. Hanna, using the data at that time available, I recommended that in every case of cobra bite from 30 to 35 cubic centimetres of Calmette's serum should be given and a larger quantity if symptoms had already set in. This estimation was founded on the assumption that the maximum amount of venom which a cobra could inject was about 45 milligrammes, a figure taken, as we have seen, from Calmette's observations. In view, however, of the facts brought forward above it is evident

[17] Indian Medical Gazette, September, 1904, p. 332.
[18] Brit. Med. Jour., April 18th, 1896, p. 967.
[9] Loc. cit. [10] Loc. cit.

that this estimation will require considerable amendment. If, then, the serum be of ordinary strength—namely, that one cubic centimetre is able to neutralise one milligramme of pure unheated cobra venom—and if the snake had injected the maximum amount of poison possible—namely, about 350 milligrammes—we can calculate that in order to neutralise this amount of venom and thus save the life of the patient 350 cubic centimetres of serum would have to be brought in contact with it. If the serum were not of the strength mentioned above or if it had deteriorated through keeping a larger quantity would be required. We have still to consider the method of injection, as this amount of serum is the quantity which would be required to neutralise completely 350 milligrammes of poison when they are mixed *in vitro* before injection. Martin,[21] repeating and extending some experiments by Fraser, has found that if a quantity of venom subcutaneously, and a neutralising dose of antivenine intravenously, be injected at the same time into an animal as good results are obtained as when the venom and serum are mixed *in vitro* before injection. If, however, the serum be injected subcutaneously at the same time as the venom, then it was found that from 10 to 20 times the neutralising dose of serum was required to save the life of the animal. Applying these observations to our present purpose we arrive at the conclusion that in treating a case of cobra bite in which the snake had injected the maximum amount of poison we should have to inject 350 cubic centimetres of serum intravenously or from 3500 to 7000 cubic centimetres subcutaneously in order to save the life of the patient. Further, if symptoms have already appeared before treatment was begun larger amounts of serum would be required to dissociate the poison from its junction with the nerve cells. There are, of course, many cases of cobra bite, cases in which the snake from many reasons may not have injected the full amount of poison possible, for the treatment of which a much smaller quantity of serum would suffice. But, as I have said, in treating any case of cobra bite we must always start with the assumption that the snake may have injected as much as 370 milligrammes of poison. We have, therefore, other difficulties to contend with in the serum therapeutics of cobra bite. The serum must be given intravenously and even then in very large quantity, too large in many cases to bring this method of treatment within the bounds of practical therapeutics. This estimation of the amount of serum which would have to be used in cases of cobra bite has received support from some experiments made on dogs by Major P. Carr-White, I.M.S.[22] This observer allowed cobras to bite dogs, treating them with anti-cobra serum immediately after the bite, and in one case even before the bite. The amount of serum injected varied from seven cubic centimetres to 60 cubic centimetres. The injections were all made subcutaneously. In all seven dogs were thus experimented with and in no case was the life of the animal saved, nor was the least benefit from the use of the antivenine noticed when these animals were compared with two controls which received no serum. An animal which received 60 cubic centimetres of perfectly fresh serum died in the same time as the controls, although the serum was injected before any symptoms of cobra poisoning had set in. It is evident, then, that in these experiments the snakes had injected a considerable amount of venom and that the quantities of serum used, although injected under the best possible conditions, were much too small to effect complete neutralisation.

Finally, I have now to draw attention to the results which have been obtained in India by the use of antivenomous serum during the years 1900–03. Through the kindness of the sanitary commissioner with the Government of India I have had access to the reports of all cases of snake-bite treated with serum during this period. In the great majority of these cases the snake was not identified. But I have already pointed out that both Calmette's serum and the serum prepared at this institute with pure cobra venom, the only two sera which have been in use, are practically specific and that no advantage would result from their injection in cases other than cobra bite. We have therefore to consider in detail only those cases in which the snake was killed and identified as a cobra. In all, 11 cases of undoubted cobra bite were treated; of these, eight recovered and three proved fatal. The details of the eight cases which recovered are as follows.

[21] Brit. Med. Jour., Sept. 10th, 1904, p. 577.
[22] Indian Medical Gazette, November, 1902, p. 431.

1. *Case which occurred in the Bombay Laboratory, reported in* THE LANCET *of Jan. 5th, 1901, p. 25.*—In this instance the snake had been in captivity for some months, during which period the poison had been extracted at regular intervals. Further, only one fang penetrated the skin. It is evident, therefore, that only a very small amount of venom can have been injected and that the quantity of serum used—namely, 28 cubic centimetres—was sufficient to neutralise this.

2. *Case reported by Colonel Scott-Reid, I.M.S., in the "Indian Medical Gazette" of October, 1901.*—While removing some pigeons from a cot in which the snake was concealed a man was bitten on the forefinger by a cobra three and a quarter feet long. The snake, however, had recently killed five pigeons, one of which was found in its stomach and four on the ground beneath the cot. A ligature was at once applied round the finger and 10 cubic centimetres of serum were injected subcutaneously. No constitutional symptoms of cobra poisoning were observed. It is probable that in this case the snake had partially or completely exhausted its venom on the pigeons before the man was bitten.

3. *Bareilly case reported by Major P. C. H. Gordon, R.A.M.C.*—A native was bitten by a cobra three feet long. Two small punctures were found on the dorsum of the right second toe. A tight ligature was immediately applied round the ankle. On arrival at hospital one hour after the bite two incisions were made over the site of the punctures and the wounds washed with chloride of lime (1 in 60); ten cubic centimetres of Calmette's antivenine were injected subcutaneously. No symptoms of cobra venom intoxication developed.

4. *Khandalla case, reported by Captain H. A. L. Howell, R.A.M.C.*—A soldier was bitten on the forefinger by a cobra three and a half feet long, which was a pet belonging to one of his comrades. A tight ligature was immediately applied round the forearm and ten cubic centimetres of Calmette's serum were injected half an hour after the bite. No symptoms of cobra poisoning developed. In this case it is probable that as the snake was a pet the glands had been removed or destroyed before it was purchased, a procedure common among snake men in India.

The following four cases are taken from the annual sanitary reports of the administrative medical officer, Central Provinces.

5. In this case the cobra was a young one, the bite was imperfect, one fang only having penetrated, and the antivenine was injected between five and six hours after the bite, up to which time no symptoms had developed.

6. A middle-aged man was bitten by a cobra three and a quarter feet long. One puncture only was seen and when the snake was examined by the civil surgeon it was found to have only one fang. Four hours later, symptoms of poisoning being then present, 30 cubic centimetres of antivenine were injected subcutaneously; nearly an hour later 30 cubic centimetres more antivenine were injected. Improvement soon followed and a complete recovery was made.

7. A man, aged 24 years, was bitten on the hand; one fang went home but the second evidently slipped between the two fingers, inflicting only a graze. 40 cubic centimetres of antivenine were injected about 50 minutes after the infliction of the bite. Up to that time no prominent symptoms of poisoning had developed nor did any appear subsequently. The snake was killed and found to be a cobra four and a half feet long.

8. The patient was bitten on the foot; 20 cubic centimetres of antivenine were injected within from ten to 15 minutes; no definite symptoms had appeared prior to injection, nor did any appear subsequently. The snake was killed and identified by the hospital assistant as a young cobra.

It is evident from a perusal of these cases that in no instance did the snake inject anything like the maximum amount of venom possible. To this fact are no doubt due the successful results of the treatment. The details of the three fatal cases are as follows.

9. *Case reported by Administrative Medical Officer, Central Provinces.*—A man was bitten on the hand by a cobra, two and a half feet long. Within an hour and before definite symptoms of poisoning had appeared 30 cubic centimetres of Calmette's antivenine were injected subcutaneously. About 15 minutes later the symptoms of poisoning became marked. Ten cubic centimetres more antivenine were then injected. The man died an hour later.

10. *Dehra Doon case, reported by Lieutenant-Colonel F. W. Wright, I.M.S.*—A man was bitten on the back of the left hand by a cobra, two and a half feet long. A tight ligature was at once applied round the wrist. The injection of antivenine began an hour after the bite and before any symptoms of poisoning had set in. In all 55 cubic centimetres of serum were given, ten cubic centimetres being injected intravenously and 45 cubic centimetres subcutaneously. The man died three and a half hours after the bite.

11. *Bareilly case reported by Captain L. P. More, R.A.M.C.*—A boy was bitten on the left thumb by a cobra a little over three feet long. A ligature was at once applied tightly round the wrist. Three-quarters of an hour after the bite the wounds were incised and crystals of permanganate of potassium rubbed in; 55 cubic centimetres of antivenomous serum were then injected, ten cubic centimetres intravenously and 45 cubic centimetres subcutaneously. The patient died two and a half hours after the bite.

In these three cases, all authentic cases of cobra bite, the serum treatment completely failed. As in the experiments on dogs, the injection of the serum seemed to have no effect whatever on the progress of the case. In each instance the patient came under treatment within an hour after being bitten, a large quantity of serum was injected, and in one case vigorous local treatment, as recommended by Fayrer, Brunton, and Rogers,[23] was resorted to. It is evident that in these cases the snake got a proper bite, that a considerable quantity of venom must have been injected, and that the amount of serum used was quite insufficient to neutralise this.

The following conclusions may now be drawn.

1. Antivenomous sera are markedly if not absolutely specific, even between the venoms of species of the same genus. Hence in any case of snake-bite the serum prepared with the venom of that species which has inflicted the bite must always be used.

2. The difficulties in collecting the poisons of the different species of snakes in sufficient quantity for purposes of immunisation are apparently very great.

3. Up to the present the only sera which have been used practically are the one prepared by Calmette and the one prepared at this institute with pure cobra venom. Both these sera are practically specific for cobra venom.

4. As the neutralising power of these two sera is not great and as a cobra can inject a large amount of venom the serum must be given in large quantity; as much as from 300 to 400 cubic centimetres, even when given intravenously, would be necessary in some cases. If given subcutaneously from ten to 20 times this amount would be required. It should therefore always be given intravenously.

5. Experiments on dogs and the records of cases of cobra bite in man bear out these calculations.

6. It is evident from the above considerations that it is a question as to whether the advantages to be gained by the serum treatment of cases of snake-bite are at all commensurate with the cost entailed in the preparation of the sera.

Note.—Just as this paper was being despatched the number of the *British Medical Journal* of Sept. 10th, 1904, containing the paper by Dr. C. J. Martin, read before the pathological section of the British Medical Association, arrived. On the subject of the specificity of antivenomous sera Dr. Martin arrives at practically the same conclusions as I have put forward in this paper.

Kasauli, India.

A REMARKABLE SEQUEL TO A CASE OF GASTRO-ENTEROSTOMY.

BY ARTHUR E. BARKER, F.R.C.S. ENG.,

PROFESSOR OF SURGERY AT UNIVERSITY COLLEGE AND SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

THE after-history of cases of gastro-enterostomy is always a matter of great interest and will some day be an important chapter in the consideration of the procedure. In the meanwhile it behoves those of us who are constantly doing this operation for one condition or another to watch the subsequent history of our cases closely over long periods and to record any unusual sequel which has been observed. The following case is offered as a contribution in this direction and possesses much intrinsic interest besides. It appears so far to be unique but it is possible that its publication may bring to light similar or analogous cases of the existence of which I at least am unaware.

The patient, a woman, aged 28 years, was admitted into University College Hospital two years ago for severe recurrent hæmorrhage from the stomach. As this had resisted all medical treatment I was asked to deal with it surgically. I accordingly performed a posterior retrocolic gastro-enterostomy in the usual way and recovery followed perfectly and with complete relief in due time of the hæmatemesis. The patient's health became excellent and she was married on March 21st, 1904. Pregnancy soon followed and is now (August) nearly five months advanced. About a month ago she began to have attacks of pain, most frequent after food and referred to the region underlying the scar just above the umbilicus. On July 21st the pains became worse and the patient had to remain in bed the whole day. The bowels acted normally on the 20th but not since. Vomiting began on the 21st. On the 23rd she vomited three times, mostly bilious matter according to her own account, and on the 24th again three times, also green. On this day she was re-admitted into hospital at 6 P.M. The following notes of her condition were made by the surgical registrar.

The patient is fairly well nourished but pale and looking ill. The abdomen moves slightly on respiration and is a little distended, partly due to four months pregnancy. The patient lies on her back with the legs drawn up. Pulse 99, good quality, respiration normal. The abdomen is slightly tender all over, but excessively so above the umbilicus in the median line. The muscles are not very rigid. Rectal examination reveals an enlarged uterus corresponding to the fourth month of pregnancy, otherwise negative. There is no movement of intestinal coils to be seen. There was no evidence of general peritonitis.

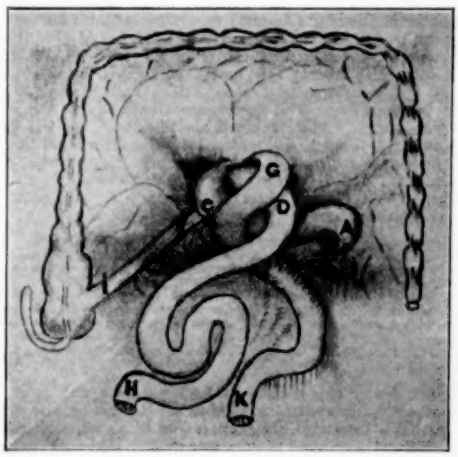
When I saw the patient at 7.30 P.M. she was as above described but was writhing with pain. I regarded the cause as probably intestinal obstruction due to an adhesion about the scar and proceeded at once to operate. Under chloroform an incision was made in the middle line *below* the umbilicus. Slipping the finger in under the scar not a trace of adhesion to it could be found. The wound was then enlarged upwards through the old scar which was perfectly firm. Some free ascitic fluid now ran out and dark, distended coils of small intestine presented on both sides. The transverse colon was sought for and drawn out and was found to be pale and much contracted. Search was then made for the gastro-enterostomy junction but it could not be clearly made out. With the finger I could feel the plica duodeno-jejunalis at the root of the left side of the mesocolon but the direction of the first part of the jejunum was not clear. On the right side of the middle of the mesocolon small intestine was felt passing under some tightly constricting mass and on drawing the coils aside the last seven or eight inches of the ileum (I), tense and contracted to the size of the little finger, were seen ending in the normal cæcum and twisted on its own axis. Following this back it was seen to pass behind the gastro-enterostomy junction and to be twisted on itself at the point of constriction. It was now plain to all present that the whole of the small intestine with the exception of the last seven inches or so had passed between the junction of the stomach and jejunum and the root of the mesocolon made two years ago and over the first part of the jejunum (A) (afferent) and then down into the general cavity of the peritoneum. But not only this, the whole small intestine having thus passed formed a huge volvulus, turning on its mesentery in a direction contrary to the movements of a clock. When this was recognised the coils as a whole were lifted up and untwisted one complete turn in the direction of the movements of the hands of a clock. Only then could the last part of the ileum (I) be withdrawn from under the constriction, all previous efforts in this direction having failed. But when the volvulus was untwisted it and all the rest of the small intestine above it could be easily and rapidly drawn out. The junction with the stomach could now be plainly seen and both the afferent and efferent limbs going to and from it. It was placed in the normal position, the coils were washed with normal saline solution (warm), and the abdomen was closed. The operation lasted 65 minutes and was well borne. Convalescence was uninterrupted and primary union was found when the stitches were removed on the eighth day.

Immediately after the operation the patient vomited for

[23] Proceedings of the Royal Society, 1904, vol. lxxiii., No. 494, p. 323.

the first time a large quantity of stercoraceous matter and on passing a stomach tube much more was drawn off. Three hours later by my direction the tube was passed again and another large quantity of stercoraceous matter was syphoned off and the stomach was washed clean. After this there was no more regurgitation from the small intestine into the stomach and all went well, the bowels acting on the fourth day. There appears to be no reason to fear that the pregnancy will be in any way influenced by the operation.

After the operation I made at once a rough drawing of the state of things found at the operation and from this the accompanying illustration has been prepared. It is sufficiently accurate to show the peculiar nature of the lesion.



A, Afferent jejunum coming out from under the plica duodeno-jejunalis (B). C, Termination of the afferent duodenum dragged back to the hidden anastomosis from which (D) the efferent jejunum is passing in its turn over the afferent portion (A to C). G, Last part of the ileum twisted round the efferent jejunum and terminating in (I) the end of the ileum at the ileo-cæcal valve. H, Distended coils of the jejunum in the general cavity of the abdomen. K, Coils of the ileum in the general cavity of the abdomen. It is seen from this diagram that the *whole* of the small intestine with the exception of the first and last seven or eight inches passed behind the gastro-enterostomy junction and was strangulated over the afferent portion where it formed a large volvulus.

The inclusion was so far advanced that the junction of the stomach and jejunum had actually been dragged under the afferent coil so as not to be visible until reduction had been effected. Naturally this prevented all regurgitation of intestinal contents into the stomach, so that there was no stercoraceous vomiting until immediately after the operation and while the patient was still on the table. It was then very abundant, as might be expected, seeing that the whole of the small intestine, with the exception of the first and last seven inches or so, had passed under and over the constriction and had formed a volvulus besides. Until the latter had been untwisted no safe amount of pull upon the last seven inches could move it, but when the volvulus was reversed it came out easily and quickly. Then the regurgitation of the loaded jejunum into the stomach began at once.

We were fortunate in securing an early operation in this case; a little later the result was almost sure to have been disaster. But the patient was most desirous of operation and said: "If you can give me as much relief this time as your previous operation gave I shall be satisfied." She is now sitting up in bed quite well (August 10th) and returns home on Saturday (August 13th), not quite three weeks after the operation.

Note.—Oct. 29th: By request the patient returned to-day to hospital for examination. She looks and feels perfectly well and has had no trouble of any kind since the operation. The bowels act regularly and well and her pregnancy is nearing its termination in December so far quite satisfactorily. There has been no sickness since the operation. The scar is firm.

Wimpole-street, W.

SUTURE OF WOUND OF THE HEART.

BY EDGAR SOMERVILLE, M.D., F.R.C.S. EDIN.

ON July 26th, 1904, I was summoned to see a man who, while in a public reading room, had attempted suicide by pushing a penknife into his heart. He gave me the following details of his *modus operandi*. He was standing reading a newspaper which was placed on a sloping wooden desk when he had a sudden impulse to take his life. He undid his waistcoat and felt for his apex beat; he then held his penknife with the large blade opened fixed to the reading-desk with his hand and bent down upon it with his whole weight, and being a tall man, over six feet, he had no difficulty in getting a good deal of pressure to bear upon the point of the knife. The blade entered the chest wall between the fifth and sixth ribs for its entire length, which was two and a half inches. He allowed the knife to remain in this position for about half a minute, during which time he broke out into a profuse perspiration and had a feeling of warmth all over his body. Being surprised and disappointed that he was still alive he withdrew the knife and re-inserted it directly above the first wound, between the fourth and fifth ribs, using the same method as before for introducing it, this wound being also to the full extent of the blade. He left the knife in position and noticed the handle move up and down with each cardiac systole. Not being satisfied with this he rotated the knife twice. At this period of the proceedings a man entered the reading room and removed the knife. I saw him about five minutes after the injury. He was then in a state of profound collapse. He was extremely pale and very faint and perspiring profusely. Both wounds were bleeding rather freely. His heart's action was feeble, the cardiac sounds being only heard with difficulty. The pulse at the wrist was barely perceptible and very irregular in time and volume. The respirations were 36 to the minute. He said that he had little pain beyond a smarting at the skin incisions. He was given a subcutaneous injection of strychnine and laid down flat. Temporary dressings were applied and he was removed a short distance to the cottage hospital.

The operation was commenced about 50 minutes after he was found. He was put under ether which was preceded by chloride of ethyl so as to reduce initial struggling and excitement. Two punctured wounds were seen over the præcordium—the upper one in the fourth intercostal space and the lower one in a vertical line below it in the fifth intercostal space, both wounds being situated between the left parasternal and mammary lines. The upper wound was enlarged laterally in both directions, making an incision of four inches; a vertical incision was made joining the two self-inflicted wounds and continued for two inches below the lower wound. The two triangular flaps of skin and muscle thus made were reflected, the upper limit of the exposed area retracted upwards and two wounds were found, one in the fourth interspace and the other in the fifth interspace, these corresponding to the wounds in the skin. The man being tall and having a long thorax the intercostal spaces were larger than usual and it was not found necessary to resect the ribs. The wound in the fourth interspace was enlarged and the pericardium exposed; this also was found to be wounded and the wound was enlarged. The pericardial sac was full of blood and on removing this a wound was found in the left ventricle of the heart, three eighths of an inch in length, with its long axis in the long axis of the ventricle. The visceral layer of pericardium had retracted, making the wound spindle-shaped, and the aperture was plugged with some lacerated myocardium, this laceration having probably been produced when the knife was rotated. Blood was oozing from the wound but the heart's action was so rapid and irregular that it was difficult to say at what period of the cardiac cycle the hæmorrhage was greatest. The lacerated cardiac muscle which was protruding was removed by scissors and the hæmorrhage then became more profuse but was arrested by the introduction of the tip of the little finger into the wound; this had also the effect of steadying the heart for the introduction of sutures, these being passed during diastole. The needle used was a curved intestinal one and was passed deep into the myocardium just short of the endocardial lining of the ventricle. Three interrupted silk

sutures were found necessary. During the suturing the action of the heart became even more irregular and embarrassed than before and the patient's condition gave rise to considerable anxiety, but after the finger had been removed and the sutures tied and a hypodermic injection of strychnine given the heart's action considerably improved. The pericardial sac was cleansed, a gauze drain was introduced, and the wound in the pericardium and intercostal muscles was closed. The lower wound in the fifth interspace was then enlarged; here it was found that both the pleura and pericardium had been opened producing pneumo-hæmothorax and pneumo-hæmopericardium, but the heart here had escaped injury. The wounds of the pericardium and pleura were cleansed, a gauze drain was introduced, and sutures were inserted. The cutaneous incisions were closed and dressings were applied.

At the close of the operation, which had lasted three-quarters of an hour, the patient's condition was very bad. The heart's action was feeble and irregular, and the pulse was barely perceptible at the wrist. He was removed to bed, strychnine was given hypodermically, and a saline enema containing brandy was administered. In an hour he had greatly improved, the pulse being much steadier and stronger and 100 to the minute. As time went on he continued to improve and four hours after the operation the pulse was 80 and fairly good. There was no vomiting after the anæsthetic and the patient took some milk in the evening. His temperature at 10 P.M. was 99·6° F., the pulse was 76, and the respirations were 24. He did not sleep well, however, but had many delusions, believing himself to be the victim of a secret society. On the day following the operation (July 27th), the morning temperature was 99·4°, the pulse was 80, and the respirations were 24; the evening temperature was 99·2°, the pulse was 72, and the respirations were 22. He was with difficulty persuaded to take food, believing it to have been poisoned. The wound looked well. The gauze was removed on the 28th, when his temperature was normal and his pulse was 68. The subsequent history of the wound was uneventful, healing being by first intention. His mental condition became worse, he had more delusions, he was sleepless, and often refused food. On August 10th, 15 days after the operation, he had become so noisy that it was found necessary to remove him to an asylum. His heart's action then was good and his pulse was 80 and quite regular. On the 26th he was allowed to get out of bed; since that time he has been up daily and his heart's action is perfectly regular. He had consulted me a few days previously to the injury for dyspepsia and when I examined him he had a systolic mitral murmur. This murmur could not be heard for some days after the operation but a fortnight later it had returned. The temporary disappearance of the murmur was probably due to the ventricular systole not being strong enough after the operation to bring out the murmur.

Leek, Staffs.

ON HÆMOPHILIA AND ITS TREATMENT.

BY LACHLAN GRANT, M.D., C.M. EDIN.,
MEDICAL OFFICER, BALLACHULISH.

IT is still uncertain whether abnormal conditions of the vascular system or morbid conditions of the blood itself are the cause of the dangerous hæmorrhage occurring in those affected with hæmophilia; in fact, the etiology and pathology of this distressing disease are practically unknown. However, this much is known, through observations extending over several centuries the hereditary transmission of hæmophilia has been conclusively demonstrated. One important circumstance concerning the "bleeder's disease" is that it nearly always affects members of the male sex and that although women can transmit to their sons the tendency to bleed it is a striking fact that they themselves very seldom suffer from the disease. So rarely does it affect females that Legg, who has written one of the most important papers on the subject, goes the length of saying: "I have never seen a case of true hæmophilia in a woman and I am inclined to think that the diagnosis of cases of hæmophilia in women is founded on mistaken observations."[1]

That females mostly escape is a very important element in the problem and it led me to think that it might possibly have some bearing on the treatment of this disease which is still largely empirical. The condition is in all probability present in the females of hæmophilic families, although it would appear to be held in abeyance throughout life in some as yet unknown way. That there must be some restraining influence in the blood or tissues of the female is evident when we take into consideration the opportunities for hæmorrhage during the separation of the placenta. Were this not so the contraction of the uterus would not of itself be sufficient to control the hæmorrhage. But it seems that parturition has no special dangers for hæmophilics, for daughters of bleeders who marry "often show an average fecundity nearly double that of the ordinary population."[2]

It naturally suggests itself whether this female immunity is not due to some constitutional influence emanating from the female reproductive centre—this probably through an internal secretion of some kind, possibly ovarian—and, further, whether the internal administration of extract of ovaries, mammary gland, or other tissues peculiar to the female, would have any effect in lessening the tendency to dangerous hæmorrhage in cases of hæmophilia. It is well known that the ovaries have a profound influence in the female. Thus, as a result of double ovariotomy, the climacteric with its train of symptoms is induced, and these symptoms are in turn said to be ameliorated by the administration of ovarian extract.

During the past ten years I have had under my care four individuals, all males, for conditions aggravated by the hæmorrhagic diathesis. They were all offshoots of a certain family. One was a boy, aged eight years. The others were his uncle and his uncle's two cousins. Though in this article I will chiefly refer to the boy's case, I may in passing mention that, of the others, one bled to death as a result of an abscess of the thigh, another had round his right ankle extravasations which took months to absorb, and the third suffered from epistaxis of three days' duration which ultimately ceased after the local application of adrenalin and the internal administration of chloride of calcium.

The boy, whose case came under my care last, had dangerous hæmorrhage from a deep cut one inch in length on the plantar surface of his right foot, between the fourth and fifth metatarsal bones. The cut was the result of his having stepped on a piece of glass the previous evening. The wound, which bled considerably, was first washed and dressed by his mother. It continued to bleed all night and next morning the mother, becoming alarmed, had the child carried to my house. There was then steady capillary hæmorrhage, the blood showing no tendency to natural thrombus formation. The wound was cleansed with hot carbolic lotion 1 in 40 and cautiously examined to see if it contained glass or other foreign body. Knowing that he was of a hæmophilic stock I did not stitch the wound for fear of setting up further bleeding. Instead I applied a pad of sterile gauze, boric dusting powder, and firm compression by means of a bandage, and at the same time elevated the limb. The dressing, however, became saturated in a quarter of an hour; gauze soaked in 1 in 1000 adrenalin solution was then applied and the leg was kept elevated for three hours. This considerably lessened the flow and the boy was removed home. In a few hours the oozing was again serious and a fresh adrenalin gauze dressing was applied. This had to be repeated during the night. On the second morning after the accident the boy complained of much pain and the oozing of sanguineous fluid was considerable. On the third day his temperature rose to 102° F. and the wound had evidently become septic. The foot was much swollen round the wound, the tissues in proximity looked unhealthy, while the oozing still went on. Iodoform gauze soaked in adrenalin was packed into the wound but this just seemed to dam back the blood, causing it to penetrate into the surrounding tissues. When this plug of gauze was removed the pressure of the surrounding tissues caused the collection of blood to spurt out. A small drainage-tube was then inserted in the centre of the gauze but the pressure necessary to prevent external oozing caused such pain that it had to be withdrawn.

By this time the boy was getting very anæmic and the prognosis was undoubtedly grave. Having procured some extract of ovarian substance prepared from the sheep, by Messrs. Burroughs, Wellcome, and Co., I commenced to give him two and a half grain doses thrice daily. At the same time the local treatment of the wound was continued,

[1] Clifford Allbutt's System of Medicine, vol. v., p. 553.

[2] Stockman in Gibson's Medicine, vol. ii., p. 22.

corrosive sublimate solution 1 in 2000 being used for cleansing. During the next two days, the fourth and fifth, the condition was much the same but on the sixth day the oozing of blood gradually lessened, the temperature came down to 99° and the pain ceased. On the eighth day the wound became healthy-looking. After this granulations formed and the wound gave no further trouble. At the end of the sixth week it was completely healed. From the third day following the injury the ovarian extract was continued as well as four-grain doses of the citrate of iron and ammonia. My colleague, Dr. A. Dingwall Kennedy, who assisted me in this case, also noted that, shortly after the commencement of the ovarian opotherapy, not only was there a marked improvement in the boy's general condition, but that the tissues in the vicinity of the wound rapidly assumed a healthy appearance. At the same time the oozing of blood ceased.

When it is considered how critical the patient's condition was there is some hope that the ovarian extract had some effect in bringing about his recovery. At the same time, it is difficult to assert dogmatically that the boy's own system did not of itself naturally overcome the morbid condition. And one has to be cautious in a disease like hæmophilia in attributing a favourable result to any special remedy, the more so as we know that occasionally in this disease the bleeding will cease spontaneously. Only further tests in this direction can prove conclusively whether this was a case of *propter hoc* rather than *post hoc*.

We are living in an age when organic extracts are extensively used and when we recognise the immense benefit already derived from thyroid and suprarenal extracts it seems not unreasonable to go further afield and to try any method of treatment which might reasonably be expected to influence the course of obscure diseases in which up to now all remedies have been uncertain. Happily cases of hæmophilia are not of frequent occurrence and it might be some time before I had experience of another case. I therefore deemed the foregoing worthy of record, so that others who might have the opportunity could try the effect of ovarian opotherapy in such cases. If a sufficiently large experience of this treatment proved of benefit its continuous use in hæmophilia would be indicated. But if this suggestion should not be supported by further investigations we must, of course, put it aside and endeavour to discover some other remedy.

Ballachulish.

A CASE OF HYSTERIA MAJOR: THE NEMESIS OF "DOWIEISM"?

BY J. S. MACKINTOSH, M.R.C.S. ENG., L.R.C.P. LOND.

IT is a commonplace of English text-books on medicine that hysteria major—"la grande hystérie" of Charcot and Richer—is not seen in its full and complete form in this country. The following case may therefore be worth recording, more especially in view of the associated history.

A few months ago I was sent for by a lady to see her children's nurse who was "in a fit." I did not arrive until half an hour or so had elapsed since the onset of the attack and so missed being an eye-witness of the scene described by the girl's mistress, but the latter's account was clear and graphic. It appeared that in going up a short flight of seven or eight stairs to the night nursery to dress the children for their morning walk the girl had slipped when half-way up and slid to the bottom, bumping her head against the newel, but had risen at once and ascended again to the room, the fall being to all intents trivial. However, shortly afterwards one of the children called out to her mother that "nurse was 'asleep.'" The lady running up found the girl lying back on a low easy chair, her head thrown back, her eyes fixed and glaring, her arms stretched out at right angles to her trunk, her legs extended and slightly parted, and her whole body absolutely rigid (the "crucified posture" of Charcot). Help being summoned she was lifted on to the bed. The next stage followed almost immediately. She now began drawing up her legs, flexing the thighs on the trunk and then kicking out again, at the same time making gurgling sounds and clawing the air. This state lasted five or six minutes and she then assumed a position of extreme opisthotonos, resting on her head and heels with teeth tightly clenched and foam on her lips. In three or four minutes the stage immediately preceding this "arc-de-cercle" spasm returned again and for a short time she resumed her exercise of limb but passed presently into what may be regarded, I think, as the stage of resolution, in which I found her on my arrival. She was then lying on her back in the "Peruvian mummy position"—i.e., with elbows, knees, and thighs fully flexed, so that all four limbs were closely and rigidly approximated to the trunk. Her eyes were wide open, staring and glassy, and she gave no sign of consciousness on being addressed. As soon as I began to examine her, however, she turned on her side with her back to me. I therefore left her a minute or two and watched her. Still maintaining the rigid flexion of her limbs she contrived by a succession of wriggles of her body to manœuvre her head into a comfortable position on the pillow and closed her eyes as if asleep, making no response to questions shouted in her ear. Firm pressure in the "ovarian" region, however, caused her to raise herself on one elbow and turn half round, staring wildly in my face and muttering incoherently, but relapsing again into a condition of apparent stupor as soon as pressure was removed. She remained in this condition all day, varied from time to time by severe fits of vomiting. She also passed her urine into the bed. In the evening I brought up a Maw's one-celled "bichromate" battery and applied the maximum current, promising to desist as soon as she would rouse herself and drink off a sedative draught. She withstood this severe faradisation for a whole hour, gradually, however, becoming more and more coherent until at length she took the medicine and answered questions rationally. A nurse stayed with her all night; she slept well and next morning appeared quite sensible. She professed to have no recollection of what had transpired the previous day but after a while remembered her slip on the stairs. During the next day or two she complained of headache and great anorexia but no other untoward symptom appeared.

This case may be regarded, I think, as presenting a complete picture of hysteria major, all the stages so vividly drawn and graphically described by Richer in his standard work on hysteria being present. I was puzzled at first to account for the severity of her attack. She had been in her present place nearly a year and had proved an excellent nurse. Her father came to see her two days after her attack and informed me that he and his wife were Midland country folk and could give me no history of nervous trouble in any member of the family. A few weeks previously to her "fit," however, I had been asked to see her by her mistress who thought that she was not looking well and I found her to be suffering from the toxæmic symptoms usually associated with a mouthful of rotten and offensive stumps. On this occasion she had informed me (quite civilly) that she disliked medical men and would take no medicine or have her mouth attended to; but reconsidered her resolution on the last point on my making her examine her gums in a hand-glass and pointing out what corrupt matter was added to each mouthful she chewed before it descended to her stomach. Recalling this interview I asked her father what was her religious denomination and he answered that the family was Church of England but that she had left it a year or more previously to join some body of American Baptists. This turned out to be the following of the notorious Dowie. Despite the family history given by the father the girl was manifestly of neurotic diathesis. Doubtless, also, the toxæmic condition of her blood contributed to the irritability of her nerve centres and to the slip on the stairs must be ascribed the final touch which upset the unstable psychic equilibrium. But to account for an attack of hystero-epilepsy of an intensity seldom if ever observed in this country some further and preponderating factor remains to be sought. This is doubtless to be found in the morbid religious sensationalism to which the patient had been subjecting herself and the professed "healer" who counts her amongst his followers is entitled to his share of credit in the achievement of his dupe. I am unable to give the subsequent history of the case, the patient having quitted the neighbourhood immediately after her attack.

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Platt's-lane, Hampstead, N.W.

OUTBREAK OF ENTERIC FEVER THE RESULT OF INFECTED ICE-CREAM.

BY W. G. BARRAS, M.D. GLASG., L.S.SC. DURH., D.P.H.,
BACTERIOLOGIST TO THE PUBLIC HEALTH DEPARTMENT, GOVAN.

TOWARDS the latter half of September a sudden and alarming outbreak of enteric fever occurred within a circumscribed area of the burgh of Govan, and as its causation was speedily determined a short account of the epidemic may be of interest, especially in view of the proposed legislation with respect to the manufacture and sale of ice-cream.

The sequence of events may be briefly summarised as follows. The first case of the series within this area was reported to the health department upon Sept. 20th, followed by two cases on the 21st, six on the 22nd, four on the 23rd, four on the 24th, and one each on the 27th and 28th respectively. To be strictly accurate, the two latter should be ante-dated to the 20th and 21st respectively, for the usual characteristic clinical manifestations were indefinite, and Widal's reaction in both instances at first gave a negative result, although the reaction was positive when the cases were notified. Both had been ill for at least a week. Excluding the case which undoubtedly gave rise to the outbreak it will be seen that in all there were 19 cases within a period of five days—viz., from Sept. 20th to 24th inclusive. Seeing that they had all occurred within a well-defined area and that only a few sporadic cases had been reported previously in other parts of the burgh (population 91,000) outside the affected zone, investigations were conducted with a view to eliciting the local cause of the outbreak. Nothing in common as regards the drainage or water-supply of the district could be regarded as the determining factor, but inquiries as to the milk-supply disclosed the fact that 15 of the 20 cases, or 75 per cent. of the total, received their milk, either wholly or in part, from a dairy in the immediate neighbourhood. At the same time it was ascertained that amongst the first cases reported several had recently partaken of ice-cream at a certain shop kept by an Italian also within the affected district and separated only by a few yards from the above-mentioned dairy, and that although the ice-cream vendor occasionally used the milk for his own personal consumption from the same source as the majority of the persons attacked, that which entered into the composition of the ice-cream was obtained from a totally different part of the burgh and which was, and still is, entirely free from any similar cases. At this stage the milk was naturally looked upon with grave suspicion, but this was soon dispelled when it was found that the dairyman in question had other three shops in the town all supplied with the same milk, but to which no cases could be attributed, in addition to which it was all "pasteurised" before being retailed or sent out to his customers, with the exception of the morning's delivery which came from two farms in an adjoining county. That the latter also could have no causal relation to the outbreak was shown by the fact that the medical officer of health of the county from which the milk was obtained reported both farms to be in good sanitary condition in every respect and that there had been no recent illness amongst the dairy hands.

As the drainage, water, and milk-supply were thus shown to have absolutely no connexion with the outbreak attention was again directed to the ice-cream shop. When the inspector called to see the proprietor he was informed by the man in charge that he had not been at business for several days on account of illness, and on visiting him at his house, which was just above the shop and entering from a common passage, he was found to be in bed and without medical attendance. This information was immediately communicated to the medical officer of health who upon examination found that the proprietor had been ailing since Sept. 4th and that he had continued attending to the manufacture and sale of ice-cream in the said premises up to Sept. 15th, since which date he had been confined to the house from what he himself believed to be an attack of "influenza" but which undoubtedly proved to be enteric fever and presented all the characteristic symptoms of the disease met with during the *third* week of the illness. In order to demonstrate that the disease was unquestionably enteric fever a specimen of his blood was sent to the bacteriological laboratory here for examination by Widal's reaction. A recent agar growth of the bacillus typhosus was employed in a dilution of 1 in 30, when agglutination and cessation of movement occurred within half an hour, thus proving beyond a doubt the true nature of the disease. The patient was again visited immediately after the reaction was found to be positive, when he was informed of the result and his shop was at once closed: the stock of ice-cream found on the premises was destroyed, the patient was removed to hospital, and the house and shop were thoroughly disinfected.

The result of further investigation was to show that without exception every one of the other 19 cases had used the ice-cream manufactured in the shop between Sept 4th and 15th inclusive, this being the period during which it had been exposed to infection. As the incubation period of enteric fever lies between the extremes of seven and 21 days the date of sickening in each instance was carefully gone into, the result of which was to show that corresponding to the shortest period within these limits the first case sickened on the 12th, whilst four sickened on the 13th, two on the 14th, eight on the 15th, three on the 17th, and one on the 19th, the extremes being in this outbreak between eight and 15 days, the usual average being regarded as from ten to 14 days. As the above source of infection ceased to be operative after Sept. 15th and as the recognised period of quarantine is 23 days and as this stage has now been passed, it is satisfactory to report that there have been no further cases in this connexion and that the outbreak is at an end.

A similar outbreak on a much larger scale has been recorded by Dr. A. Campbell Munro, medical officer of health of Renfrewshire, in the latter half of 1893.[1] That enteric fever may be spread by the use of ice and ice-cream has been conclusively shown by the fact that the micro-organisms of the disease have been cultivated after having been frozen in ice for 103 days.[2] The above facts show the absolute necessity of having all such premises duly licensed and inspected under the Dairies, Cowsheds, and Milk-shops Order, notwithstanding the judgment that an ice-cream vendor in whose business milk forms such an important constituent is held not to be a purveyor of milk (Lang *v.* Pianta, Jan. 22nd, 1894, 21 R. (J.C.) 20; 1 S. L. T., 474).

Govan.

A CASE OF ACUTE INVERSION OF THE UTERUS; REDUCTION BY TAXIS ON THE SEVENTH DAY AFTER LABOUR.

BY E. OCTAVIUS CROFT, M.D. DURH., M.R.C.S. ENG.,
HONORARY SURGEON TO THE HOSPITAL FOR WOMEN AND CHILDREN, LEEDS; DEMONSTRATOR OF OBSTETRICS, UNIVERSITY OF LEEDS.

IN THE LANCET of June 11th, 1904, p. 1649, I, in association with Mr. R. Muschamp, fully reported a case of acute inversion of the puerperal uterus in which reduction by taxis was satisfactorily effected on the eighth day of the puerperium. A similar case in which I replaced the uterus on the seventh day having recently come under my care is, I think, worthy of a brief record owing to the rarity of the condition.

The patient, aged 29 years, was delivered of her third child on July 4th, 1904. She was attended by a midwife. There is no sufficiently trustworthy history as to the events which occurred at the time. On the 5th, however, the patient sat up in bed to use the bed-pan and while straining she felt something come down. Severe hæmorrhage took place and a medical man who was sent for discovered the completely inverted condition of the uterus and as a temporary measure plugged the vagina. On the 6th the patient was anæsthetised with ether and a prolonged attempt was made to reduce the inversion. As further attempts might possibly have been harmful it was thought better to desist and to adopt gradual methods. Aveling's repositor was then inserted, but owing to the large size of the uterus it could not be kept in favourable position to be of use. On the 11th, being the seventh day of the puerperium, she

[1] Public Health, vol. vii., p. 30.
[2] Aids to Sanitary Science, by Dr. F. J. Allan, Medical Officer of Health of Westminster, 1903, p. 193.

came under my care in the Hospital for Women and Children, Leeds. A careful examination showed the uterus to be still completely inverted. There had been no further hæmorrhage, the lochial discharge being moderate in amount and not foul. The patient was very anæmic and the temperature was about 101° F. As the uterus still seemed fairly soft I decided to try if reduction could be yet effected provided no undue force were required. The patient was anæsthetised on this occasion with chloroform and was placed in the left lateral position. After the usual preparations I introduced my left hand into the vagina and grasped the inverted uterus in the hollow of the hand. The fingers of the right hand were employed for counter pressure on the rim of the inverted cervix through the abdominal wall. The depression caused by the inversion was easily defined. Without great difficulty I succeeded in gradually obtaining complete reduction until the fundus uteri could be defined through the abdominal wall and the shape of the uterine cavity ascertained to be normal by the fingers of the left hand following the ascending uterine walls. The uterus was washed out and carefully packed with iodoform gauze from above down. The gauze was renewed next day and at intervals for a few days during which the uterus contracted well and retained its normal shape. The temperature gradually subsided and the patient made a good recovery.

In attempting replacement of an inverted uterus at an interval of several days, as in my two cases, it is obviously a delicate question whether reduction can be safely done without injury. The possibility of inflammatory effusion and adhesion being present on the peritoneal aspect of the uterus and cervix has to be borne in mind. In both cases, as far as one could judge by the absence of pain and tenderness or the presence of any thickening or swelling in the pelvis above the cervix, it seemed probable that no such trouble was present. In both cases the actual reduction only took a few minutes and undue force was not required. I think possibly that the choice of chloroform instead of ether may have facilitated replacement, the uterine muscle being more easily relaxed by chloroform.

Leeds.

A FATAL CASE OF TABETIC GASTRIC CRISIS.

BY LEONARD J. KIDD, M.D. BRUX., L.R.C.P. EDIN., M.R.C.S. ENG.

I KNOW of no recorded case of this condition but I find in the newest edition of Church and Peterson's "Nervous and Mental Diseases," 1903, p. 428, this statement: "They [the gastric crises] may even cause a fatal termination." On the other hand, Gowers and Taylor write, even in the latest edition of their "Manual of Diseases of the Nervous System," vol. i., p. 416: "Even the gastric symptoms, prostrating as they are, are never fatal."

The patient was a good clinical witness; he neither exaggerated nor underrated his condition. He was bright, cheerful, and quite sound mentally, and continued his work till within a fortnight of his death. When he came to me he had been to all the well-known neurologists of London who had all diagnosed his case as one of tabes dorsalis. I saw him first on Sept. 14th, 1896. His age was 45 years; he was married and had several healthy children. He had syphilis when 25 years old (he was quite frank about this), otherwise he had a clean bill of health for the last 20 years. With regard to the history of the illness, for 18 months he had had attacks of severe vomiting, with only slight pain, of one or two weeks' duration (his stomach was said to be dilated, he told me). For from 12 to 15 months he had had little or no sexual desire. For three months there were "numbness of the calves, chiefly the right, and front of the knees," "tingling sensation of the leg," and the ground "felt peculiar." (These sensations had persisted.) He had lateral diplopia once; the date was not entered in my book. On clinical examination the gait was found to be normal and the knee-jerks were absent, even on reinforcement. The pupils were equal, circular, reacted well to light and on accommodation, and dilated well to shade. The ocular fundi were normal in all parts. The tongue was clean; digestion was stated to be good between the attacks. There was no bladder trouble but on further inquiry from me as to the appearance of his urine he said it had for two or three years often been muddy. There were no girdle sensation and no lightning pains. Examination of the abdomen and chest was negative. There was no evidence of intracranial disease, especially cerebellar disease. There was nothing in his case to negative the diagnosis of tabes, for neither normal pupils nor absence of pains, ataxy, and optic atrophy, nor the "incomplete" nature of the crises could weigh for a moment with the positive points mentioned. I saw him again ten days later. He then felt numbness of the lower part of the thighs and he said that his gait was a little unsteady, but this was not obvious to me on testing it then. He was treated with tonics and cod-liver oil, and tepid brine baths were ordered, also salt douches to the legs after a hot foot-bath, and rubbing of the legs and back. His condition remained practically unchanged for just two years. I was then urgently called to him at his home as he had had an unusually severe gastric attack for about six days and it showed no signs of yielding. The patient when I arrived was vomiting frequently a thin watery fluid. At the beginning of the attack it was bilious. The tongue was clean and there was no diarrhœa. The knee-jerks were absent. Indeed, the only alteration I could detect in his condition after the lapse of the two years since I had last seen him was, in addition to increased thinness, the almost complete loss of pupillary light reflex in both eyes. The only point that perhaps threw some light on the severity of this attack was that during a few days' holiday a week previously, the weather being very hot, he had eaten very plentifully of raw greengages but he had had no diarrhœa. He was kept as much as possible in the prone position and had the bowel washed out. I never doubted the attack would cease in the course of a few days probably and I gave a good prognosis. However, he did not improve nor did he become appreciably worse till five days later, when his circulation failed ominously, according to Mr. H. J. Hildige of Pinner, who was in attendance on him. He rallied on the following day, when I saw him about 9 A.M. He was sleepy but answered questions well and correctly and was quite cheerful. He died, however, the next day; there was no post-mortem examination.

Though the case followed the rule that ataxy is either absent or slight so long as gastric crises occur, yet it was in some respects one of a rather unusual type. Möbius writes, in his very full article on Tabes in "Twentieth Century Medicine," vol. xi.: "Gastric crises may appear as the first signs of the disease and may continue for years before other symptoms noticeable by the patient manifest themselves." He writes further, on the same page: "The great majority of tabes patients, although constipated, have a good digestion." Gowers and Taylor also note this latter point. Of impotence in male tabetics Möbius writes: "That it generally develops sooner or later. May appear at a very early or at a relatively late stage. In rare cases the function suddenly disappears for ever. As a rule, desire becomes more and more weak and infrequent. The potentia generandi is probably often preserved unless a complication (epididymitis or sarcocele) is present. But finally an atrophy of the testicles may develop." Now, my case had at any rate great diminution, if not absolute loss, of sexual desire from early in 1895 to September, 1896, and to my surprise I found in 1898 that his wife bore him a child some time after the latter date, I think in 1897.

The lessons of an instructive case seem to me to be: a tabetic with severe incomplete gastric crises, great diminution of sexual desire, and good general health may show practically no change after the lapse of three and a half years with the exception of increased loss of flesh and some pupillary phenomena. He may become a father after some two years of his disease and still be quite near his death from intractable vomiting unless morphine be used. I think that we ought to try to cut short gastric crises by morphine before any marked degree of prostration be reached and I think also that tabetic patients should be kept from such dietary indiscretions as a surfeit of greengages.

Stratford-place, W.

THE ENTRIES AT THE MEDICAL SCHOOLS.—Last week we published a table showing the entries at the medical schools in London and the provinces. We have now received the figures relating to University College, London, which are as follows: Full medical course, 30; special courses and preliminary science, 40. Last year the number of full medical students at this College was 25, so that this year there is an increase of five.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. MARY'S HOSPITAL.

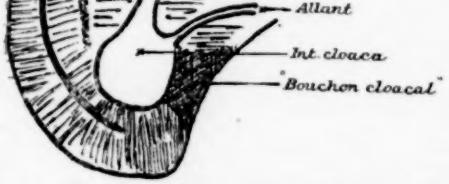
A CASE OF A RARE VARIETY OF MALFORMATION OF THE ANUS.

(Under the care of Mr. STANSFIELD COLLIER.)

FOR the notes of the case we are indebted to Dr. Geoffrey Bate, late house surgeon.

A healthy-looking child, aged five months, was taken to St. Mary's Hospital on account of the pain suffered when passing motions. On examination the following condition was found. The middle line behind the scrotum was occupied by a thick fold of skin, about one and a half inches long, continuous in front with the median raphé of the scrotum and attached posteriorly just behind the anal opening. The fold was laterally compressed by the buttocks and fæces passed equally freely on either side of it. The skin forming this bridge over the anus was similar to that of the scrotum, had a very slightly marked median raphé, and contracted slightly on stimulation. Under an anæsthetic the whole fold was easily dissected off; it was then seen that the anus was abnormally small; this was dilated at intervals for some weeks and the child now passes motions freely and without pain and the appearance of the parts is normal.

Remarks by Dr. BATE.—I am indebted to Mr. Stansfield Collier for permission to report the above case of a comparatively rare variety of malformation of the anus which is of particular interest as emphasising the importance of the "anal membrane" and the so-called "bouchon cloacal" in the formation of the ano-rectal tube. Neither Bodenhamer nor Giraldés, in exhaustive treatises on malformations of the



rectum and anus, mentions any such anomalous condition as this, but Harrison Cripps, classifying anal malformations in five groups, describes as his fourth group those cases in which "the anus and bowel may be perfectly formed but the outlet obstructed by a tail-like fold of skin extending from the scrotum to the tip of the coccyx." He reports three cases, one in his own experience and two recorded by Morgan from the Hospital for Sick Children, Great Ormond-street, in THE LANCET of Oct. 22nd, 1881, p. 705. The formerly accepted view that the ano-rectal tube is formed by the meeting of an ectodermal depression with the hind gut could not account for the malformation above described. The later view—that the anus is formed by the absorption of a definite cellular mass, in which the absorptive process commences laterally—is capable of explaining this malformation, and probably also the variations of the hymeneal orifice. The "definite cellular mass" above referred to is known as the "bouchon cloacal," described by Tourneux as a specialised part of the anal membrane forming the anterior wall of an internal cloaca at the junction of the allantoic stalk with the hind gut (see figure). The anal membrane is, at first, however, a middle-line structure, most evident centrally, thinning off laterally; hence the process of absorption of the "bouchon" would tend to be incomplete in the middle line at a stage when a complete opening had been formed on either side. In this way, possibly, the tail-like band of tissue seen in this case may have had its origin.

VICTORIAN EYE AND EAR HOSPITAL, MELBOURNE, AUSTRALIA.

A CASE OF SUTURE OF AN UNHEALED CORNEAL INCISION 19 DAYS AFTER EXTRACTION OF CATARACT.

(Under the care of Mr. JAMES P. RYAN.)

A MAN, aged 48 years, of spare habit and in ordinary health, was admitted into the Victorian Eye and Ear Hospital on Jan. 22nd, 1904. His right eye was blind from an injury received some years previously and being tender to the touch and irritable-looking was excised on the 27th. The cornea of the left eye was much damaged and opaque (except in its upper third) from former keratitis and lead deposit. The pupil dilated only partially and irregularly on account of adhesions to the anterior capsule, the lens appeared to be hazy, and his vision amounted to counting fingers with difficulty at from seven to eight inches. The prospect of doing anything to restore useful vision seemed remote but as in his present helpless state the man was debarred from earning a livelihood, and as he was most anxious that something should be undertaken with the object of improving his condition and was willing to take all the risks, Mr. Ryan decided upon removing his lens. However, it was not quite ripe and for safety sake a preliminary iridectomy was done early in April and on May 18th the operation for extraction was performed. This entailed no special difficulty and was followed by rather less than the normal reaction but the corneal operation wound remained unhealed and after some days the vitreous began to protrude. Compression with pad and bandage was applied for nearly a fortnight without effect and, as there was the greatest danger of the contents of the eyeball being squeezed out on any slight exertion on the part of the patient, it appeared to Mr. Ryan that nothing short of closing the corneal incision would, in the circumstances, be effectual. Accordingly on June 6th, 19 days after the extraction, the protruding vitreous body being gently and gradually pressed within the globe and held back by a fine spud, the lips of the wound were drawn together by two fine silk sutures passed through the whole thickness of the sclera. They were removed eight days afterwards when it was found that the operation wound was completely and evenly healed. Local anæsthesia by means of cocaine was employed and antisepsis (imperfect no doubt) was procured by carefully cleansing the field of operation with warm saturated boric lotion and by the frequent instillation of cyanide of mercury solution (1 in 2000). Mr. Ryan had no great difficulty in steadying the edges of the corneal wound while the needles were being passed and at the same time, with the help of an assistant, in keeping back the vitreous while the sutures were being tightened.

Remarks by Mr. RYAN.—One might reasonably enough have predicted in this case the non-union of surfaces which had not been "freshened." It may be that some attachment between them and the vitreous had formed and that the breaking down of such adhesions whilst the vitreous was being forced back produced some "rawing" of the opposing lips of the wound. The result may be deemed sufficiently good when from having been practically blind the patient has recovered an amount of vision which renders him more or less independent of others and enables him to do something towards earning a livelihood. I can find no allusion in the text-books to such a procedure as the above having been employed, though I am aware that scleral wounds have been stitched. I have myself done so on several occasions and with gratifying results and there seemed to me to be no valid reason why a similar practice should not be carried out in gaping wounds of the cornea.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Simultaneous Occurrence of Filariæ and Malarial Parasites in the Blood.—The Nature of the so-called Dermoid Cyst of the Ovary.—Two Methods for Comparing Microscopically Abnormal and Normal Tissues.—Acute Lymphatic Leukæmia.

A MEETING of this society was held on Nov. 1st, Mr. RICKMAN J. GODLEE, the President, being in the chair.

Dr. C. F. SELOUS read a paper on the Simultaneous Occurrence of Filariæ and Malarial Parasites in the Blood and showed a lantern slide of the blood of a man admitted into St. Thomas's Hospital with a typical attack of malaria. This was first contracted in India. The spleen was enlarged. Very numerous malarial parasites of a benign tertian type were found together with one filaria. There was no eosinophilia.—Dr. T. GRAHAM FORBES asked if the filaria described belonged to the variety filaria sanguinis hominis or to the filaria perstans. He said that the occurrence of filariæ in the blood of negroes was not uncommon and was found in about 12 per cent. In 3 per cent. the filaria belonged to the variety sanguinis hominis, whilst in 9 per cent. it was of the variety perstans. This latter did not produce any symptoms.—Dr. SELOUS, in reply, said that the specimen was probably filaria perstans but the patient had only been in India and the occurrence of the variety was unknown there.

Mr. S. G. SHATTOCK exhibited a remarkable specimen of so-called Dermoid Cyst of the Ovary. Projecting into the interior of a smooth-walled daughter cyst of a large ovarian cystoma was a teratoma of fat covered with skin; this was furnished with two ill-formed lower extremities between which was a vulva and behind the latter was a median perineal raphé; above the vulva there grew a tuft of long pubic hair, whilst the rest of the teratoma was covered with lanugo only. At the base of the mass was a smooth cavity in which there lay a blind coil of intestine. In each of the lower limbs there was an elongated compound skeletal element and in the trunk of the teratoma was a rudimentary spinal column terminated by a pelvic girdle. On one side there was a rudimentary upper limb. The presence of medullated nerves was demonstrated in connexion with the spine. Mr. Shattock, after describing the specimen, discussed the pathogenesis of the so-called dermoid cyst of the ovary. The ordinary dermoid cyst of the trunk was sufficiently explained as due to epiblastic sequestration occurring during the closure of embryonic clefts. The cysts of the ovary and testicle, containing as they did such highly differentiated structures as teeth and bone, were marked off from all others. Dentigerous cysts had been described in the neck, but for these a satisfactory explanation had been offered in viewing them as the results of an abortive anterior dichotomy. In a similar way, by an abortive posterior dichotomy were explained the presence of a third compound lower limb and certain of the sacral teratomata. As long as the dermoid cyst of the ovary was not differentiated from those of the trunk it was thought sufficient to point to the epiblastic origin of the Wolffian duct as the explanation of it. At the best such an explanation could hold only for a simple parovarian dermoid or a simple dermoid of the hilum of the ovary and was quite inadequate for the common complex ovarian cyst with its teeth and bone, and as in the present specimen, with its contained intestine. The great interest of the specimen exhibited lay in the circumstance that it proved the true nature of the less striking and more ambiguous forms of ovarian dermoids. The teratoma shown might be classed as an acephalous, acardiac parasite and compared with the acephalous, acardiac twin, in which the only external semblance of human form might appear in the presence of lower extremities appended to the otherwise spheroidal mass of skin-covered fat, containing a rudimentary skeleton, and perhaps a coil of intestine. The eminences which had been named pseudo-mammæ projecting into ovarian dermoids and which might be merely masses of fat covered by piliferous skin, were to be regarded, in Mr. Shattock's opinion, as the lowest grade of a teratoma, answering to the "amorphous" parasite of teratology. The first conclusion reached, therefore, was that the so-called dermoid cyst of the ovary (with, perhaps, few exceptions) was a teratomatous cyst and by this name it should be known, for it was not a cyst of skin but a smooth-walled cyst into which a skin-covered teratoma projected. One theory which had been held was that such formations resulted from an impregnation which had been relatively abortive in result. As a sufficient refutation it had been pointed out that these cysts might be met with in the unmarried and in children. Nor had any attempt been made to apply the theory to the case of teratomatous cysts of the testicle. The view usually adopted was that of the impaction of a second individual which had started on its development synchronously with the first, but which had subsequently failed in its progress. The chief argument urged by Mr. Shattock against the theory of a twin impaction was partly the sheer commonness of ovarian teratoma and partly the difficulty of understanding why the impaction should regularly take place into the substance of the ovary. The fairly frequent occurrence, again, of the lesion in both ovaries and the presence of two or even three "dermoids" in the same ovary would on this theory imply as many fœtal impactions. The theory proposed by Mr. Shattock was one which he termed epigenesis, and it was that the ovarian teratomatous cyst resulted from the fertilisation of the primordial ova in the embryo, so that the embryo furnished a second, imperfect individual, the origin of which was not, therefore, synchronous with, but later than, itself. It would be remembered that the primordial ova arose at the surface of the genital ridge—i.e., actually on the free inner surface of the abdominal cavity. In the chick the body cavity had been produced and these ova were already formed on the fourth day. In man it was commonly held that all the ova of the adult were formed before the time of birth. With respect to the access of spermatozoa, it was not necessary to suppose that a second penetration of the developing ovum took place. It was well known that more than a single spermatozoon might perforate the investing membrane of the ovum, and it became thus quite conceivable that a surplus might come to lie between the cells of the blastoderm ready to fertilise the primordial ova which were so soon formed after the cleavage which resulted in the production of the body cavity. The cyst wall of the teratoma would thus answer to the sac of an ovarian pregnancy. Amongst zoologists, besides the ordinary fertilisation of the ovum (previously independently matured by the extrusion of its polar globules) three methods of embryogenesis were recognised. 1. Shock fertilisation. This involved the preliminary independent maturation of the ovum, but the incentive to the after division and development of the embryo was mechanical; the ova of the starfish could be "fertilised" by means of "soda water" added to the sea-water of the aquarium or by mere shaking. 2. Parthenogenesis, occurring in many insects, involved a maturation of the ovum but no proper fertilisation, the embryogenesis being started by the return of, or the want of extrusion of, the second polar globule, which acted in place of the male element. 3. Sporogeny. Here the embryo developed from the ovum without any preliminary maturation and without any fertilisation. This had been observed in the jelly-fish. Mr. Shattock's theory of epigenesis involved the preliminary "maturation" of the ovum at an abnormally early date. He thought the phenomenon of sporogeny (the only method not involving this maturation) too far removed from man to allow of its being considered applicable. As to the occurrence of teratomatous cysts of the testicle the assumption had to be made that the organ had in the embryo contained primordial ova—i.e., that the gland was an ovotestis. Examples of this condition had been carefully described by different observers in man; and it was well known in the dogfish that true ova might be encountered in the substance of the testicle. Mr. Shattock viewed the primitive normal condition of the sexual glands in man to have been hermaphrodite. The presence of both male and female passages in each human embryo pointed to a hermaphrodite ancestry. The great rarity of teratoma of the testicle tallied with the rarity of a hermaphrodite gland. On the impaction theory, it should be as common in the testis as in the ovary. In the male one was dealing with a testicular pregnancy. The occurrence of deciduoma malignum in the testicle, involving, as it did, the presence of fœtal membranes, Mr. Shattock held to accord with the theory of a fertilisation of ova in the testicle during embryonic life. The presence of pubic hair in the teratoma was best explained by the action of an internal secretion from the mother which reached the teratoma by way of the blood stream.—Professor F. HOBDAY

asked Mr. Shattock whether he had ever come across an instance of a dermoid of the ovary in an animal. It was not uncommon to find a dermoid of the testicle in horses but dermoids in other animals were extremely rare.—Dr. W. BULLOCH asked Mr. Shattock whether he had ever seen a true dermoid of the ovary. He said that so-called dermoids were not uncommon but that they all contained a knob covered with skin and in some cases bone and gut were present.—Mr. SHATTOCK replied that he had not seen a true dermoid of the ovary. Dermoids were quite distinct from the teratomatous cysts of the ovary.

MR. SHATTOCK and Dr. SELOUS exhibited sections illustrating Two Methods for Comparing Normal with Abnormal Tissues beneath the Microscope, which they termed the method of superposition and that of the composite block. The methods were more particularly adapted for class purposes and were more especially applicable in the study of bone marrow, the central nervous system, and the blood. The plan of superposition consisted in mounting a normal section directly underneath the diseased section—i.e., without the intervention of a second cover-glass—so that by merely altering the focus the two could be studied in rapid succession. The sections should be cut from paraffin blocks and should not be more than 2 μ in thickness. Although mounted in direct apposition there was quite a distinct microscopic interval between them due to the intervention of a thin layer of the mounting medium and they were readily studied with $\frac{1}{12}$th inch objective. One section was fixed to the slide and the other to the cover-glass, or in the case of blood two cover-glasses were mounted in apposition and then mounted to the slide. By a composite block was meant a block compounded of two: a broad face of tissue was first exposed in each of two blocks and the latter were then cemented together in paraffin. The sections were afterwards cut at right angles to the plane of apposition, so that by placing the section with the line of junction across the field of the microscope a view was obtained of both the normal and abnormal tissues at the same time.

Mr. L. S. DUDGEON read an account of an investigation which he had made on a case of so-called Acute Lymphæmia. The case occurred in a man, aged 37 years, who was admitted to St. Thomas's Hospital under the care of Dr. H. G. Turney. The illness was of about a month's duration before he went to the hospital. He was intensely anæmic. There was enlargement of the spleen and liver, but no evidence of any glandular enlargement except the glands in the neck which were enlarged owing to the septic condition of the mouth. Examination of the blood on admission showed 43,980 leucocytes per cubic millimetre. The ratio of white to red cells was 1 to 48. The small lymphocytes numbered 62·7 per cent. and the total number of mononuclear cells was found to be 42,724 per cubic millimetre. A fortnight later, two days before the patient's death, the leucocytes numbered 449 800 per cubic millimetre. The large lymphocytes were 83·6 per cent. and the total number of mononuclear cells per cubic millimetre was 447.100. Three definite neutrophilic myelocytes were seen while counting 2000 leucocytes. The ratio of white to red cells was now 1 to 2. There were never any mast cells or other type of myelocytes present. No nucleated red cells were seen. He referred to the presence in the blood of very anæmic people—i.e., those who had less than 1,000.000 erythrocytes per cubic millimetre—of an agglutination of the red blood corpuscles, which could be prevented by treating the blood corpuscles with 0·85 per cent. of normal saline solution. It was thought that this agglutination of the red blood corpuscles might be the cause of capillary thrombosis in these cases. A pure culture of the staphylococcus albus was obtained from the patient's blood during life. The chief points of interest which were noticed at the necropsy were: (1) very large numbers of visceral hæmorrhages; (2) great enlargement of the hæmolymph glands; (3) great enlargement of the spleen and the liver; and (4) absence of any lymph gland enlargement. There was a well-marked reaction for free iron in the liver which was found to be present to the extent of 0·17 per cent. The diagnosis of acute lymphæmia in preference to acute myelæmia was made because: (1) the mononuclear cells present in the blood were considered to be lymphocytes and not myelocytes; (2) of the absence of mast cells; (3) of the absence of nucleated red blood corpuscles; and (4) lastly, because there were no eosinophilic, basophilic, or amphophilic myelocytes.—Dr. H. BATTY SHAW referred to the difficulty of determining the nature of the myelocytes by the staining of the granules. He mentioned a case in which the blood of a patient had been examined by two different observers by the same method and stains; in the one the granules were stained, whilst in the other the granules were unstained. He doubted whether the case recorded by Mr. Dudgeon was not a case of myelogenous leucocythæmia.—Dr. GRAHAM FORBES referred to the case of leukæmia in a child in whom at the necropsy the kidneys were found greatly enlarged and densely infiltrated with lymphocytes and many hæmorrhages. In this case streptococci were found in the blood the presence of which was assumed to be a terminal infection.—Dr. W. D'E. EMERY said that he thought many of these cases were septic, as was suggested by the case quoted by the last speaker. He thought that the triacid stain was far more trustworthy for the staining of granules than any other method, although it was more difficult to apply.—Dr. J. F. H. BROADBENT said that he thought there was no difficulty in distinguishing between a myelogenous leukæmia and acute lymphatic leukæmia. He did not agree with the last speaker that these cases were septic in origin and the changes in the organs were quite different in the two conditions.—Dr. O. F. F. GRÜNBAUM said that he had come across a very similar case to that reported by Mr. Dudgeon. The whole course of the disease was eight weeks, the enlargement of the glands was very slight, and the liver contained free iron. In all these cases a septic condition of the mouth was present. He thought it difficult to draw a distinction between acute and chronic lymphatic leukæmia.—Dr. A. G. PHEAR said that he did not attach much importance to the presence or absence of granules in the myelocytes, as that depended largely upon the method of staining. He did not think that this could be used as a distinguishing feature between myelogenous and lymphatic leukæmia.—Mr. DUDGEON replied.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Oct. 28th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. F. E. BATTEN exhibited a case of Acute Ataxia due to Encephalitis Cerebelli. A boy, aged three and a half years, had had measles in March, 1904, and there was a family history of tuberculosis. During convalescence he became dazed and then unconscious and remained so for a week. He then had convulsions and tremors and on becoming conscious he could not sit up or speak. A month later he had marked incoördination of both legs and arms. There was no paralysis. The knee-jerks were well marked and there was a tendency to ankle clonus. He swallowed well and spoke in a slow, hesitating manner. Since then only slight improvement had occurred. His mother complained that since his illness his moral sense had become much perverted.—The PRESIDENT referred to a case which he had seen some years before and which he now believed had been due to encephalitis resembling Dr. Batten's case. The patient was a boy, about four or five years of age, who went to the Evelina Hospital with symptoms somewhat resembling those of insular sclerosis, associated with ataxy. Great doubt was expressed at the time as to the diagnosis. The patient was seen 18 months afterwards and was still highly ataxic, but it appeared probable that he subsequently recovered.

Dr. E. D. MACNAMARA exhibited a case of Acute Ascending Paralysis in which the tetracoccus had been found in the spinal fluid. The patient, a man, aged 30 years, was admitted under the care of Dr. William Murrell on August 3rd, 1904, with a history of commencement of loss of power in the legs 11 days before, which within three days had culminated in absolute palsy. Three days before admission there were first noticed weakness of the arms, difficulty in swallowing, and double vision. There was a history of an attack of syphilis at the age of 24 years which had been actively treated. There were found on admission total paralysis of the legs except in the right hallux, weakness of the arms, and defective articulation and ocular movements; both pupils were almost inactive to light. No reflexes were obtained from the lower limbs; the other reflexes were normal, as were also the electrical reactions. There were no subjective sensory symptoms or other objective signs. After August 8th improvement commenced and had continued. Speech, ocular movements, the pupil reaction, and the arm movements had been recovered. He could move his legs and the knee-jerks were returning but he could not

yet walk.—Dr. E. F. BUZZARD referred to a case under his care but he could not say that the case before the meeting was identical with his own. There were three chief varieties of ascending paralysis: (1) a very rapid generalised paralysis, usually fatal; (2) a paralysis with a distribution like peripheral neuritis which usually recovered; and (3) acute ascending meningo-myelitis with anæsthesia. The bacteriology of the disease had still to be discovered.—Dr. BATTEN hesitated to regard Dr. Macnamara's case as a typical one of ascending paralysis. It seemed rather to belong to the toxic group of peripheral neuritis allied to diphtheritic paralysis.

Dr. J. H. BRYANT exhibited two cases of the Peroneal Type of Family Amyotrophy, brother and sister. The girl, aged 12 years, had whooping cough at four years of age, after which she could not walk properly and she was treated for infantile paralysis of the legs by orthopædic apparatus. At five and a half years she had scarlet fever and measles at six and eight years. Wasting of the hands was first noticed at the age of eight years. The muscles of the thenar and hypothenar eminences and the interossei in the upper limb, and the small muscles of the feet, the peronei, tibialis anticus, and extensor longus hallucis in the lower limb were now atrophied. The boy, aged eight years, was first noticed to become weak after measles at two and a half years of age his legs frequently gave way and he could not lift his big toes. When first seen in 1903 the paralysis of the extensor longus hallucis was the most marked. The paralysis had increased and the feet were now in a position of talipes equino-varus. A paternal uncle of these children was suffering from similar weakness and wasting of the legs and hands.

Mr. J. JACKSON CLARKE exhibited a case of Hard Fibroma of the Scapula and Spine. The patient was a female, aged 24 years. The left scapula was found to be painful, elevated, and fixed by a rounded tumour situated at the middle of the vertebral border. An exploration in May, 1901, exposed a hard, white growth which hardly bled at all. It filled the subscapular fossa and was attached to the ribs. As much as possible of the growth was removed. Since this operation the tumour had slowly extended upwards along the spine, causing much pain.—Mr. W. G. SPENCER wondered whether the growth might not be of the nature of a fibrous myositis, because the lesion seemed so diffuse in places.

Mr. H. A. T. FAIRBANK exhibited two cases of Sprengel's Shoulder Deformity. The first was that of a girl, aged four years, whose right scapula was situated at a higher level than the left and nearer to the middle line. The angle of the scapula was rounded off. A band ran from the occiput to the vertebral border. The mobility of the scapula was diminished. The second case was that of a girl, aged 12 years, whose scapula was also at a higher level. The mobility was very much diminished but there was no sign of a fibrous band or bony ridge. The right leg was wasted, apparently from infantile paralysis. The dorsal spine was curved to the left, the lumbar to the right, and the right side of the face was flattened. In neither case was there any family history of such a deformity.—Mr. JACKSON CLARKE drew attention to the leading feature of such cases—namely, deformity of the scapula, the spine, and the ribs, with shortening of the muscles attached to the scapula.—Mr. R. T. H. BUCKNALL discussed the pathology of the condition. It might be due to initial malformation of embryonic origin or to a malposition of the arm in utero.

Mr. JACKSON CLARKE exhibited a case of Unilateral Congenital Dislocation of the Hip reduced by the method of Lorenz. A girl, aged seven years, had a typical displacement at the right hip which was reduced in August, 1903, as confirmed by a skiagraph. The abducted position was maintained for a year. The child was now walking about without apparatus with the head of the femur in position.

Mr. NOBLE SMITH exhibited: 1. A case of Unilateral Congenital Dislocation of the Hip in a girl, aged seven years, who was operated upon by the Paci-Lorenz method in January, 1894: the limb was maintained in the abducted position for six months and the joint was now firm and moveable, the situation of the femur being shown in a skiagraph which was exhibited. 2. A case of Double Congenital Dislocation of the Hip in a girl, now aged seven years, who was operated upon by the Paci-Lorenz method in January, 1903, the abducted position being maintained for six months. The joints were now firm and in a normal situation and the children continued to improve in gait.—Mr. A. H. TUBBY, in discussing these three cases, said that he had found the greatest difficulty after operation in satisfying himself that the head of the femur was really in its proper position, even by the aid of the x rays. What usually took place during treatment was that the head of the femur became transposed from a posterior to an anterior dislocation.—Mr. JACKSON CLARKE replied and contended that the perfect restoration of function could not become as complete as it was in these cases if there was merely a transposition of dislocation. After a careful study of the skiagraphs exhibited he had no doubt that a true reduction was effected.—Mr. NOBLE SMITH emphasised the difficulty of getting good results unless the abducted thighs were placed behind the vertical plane of the body, and unless the limbs were fixed in that position for at least six months.

Mr. TUBBY showed a case of Ulceration of the Tongue, with Destruction of the Soft Palate, of Uncertain Origin. The affection had commenced with a hard lump in the tongue, first noticed in January, 1904. There was no history of syphilis and anti-syphilitic treatment had failed. There was a family history of tuberculosis. The microscopic examination yielded negative results.—Mr. CHARTERS J. SYMONDS expressed the belief that the ulceration was probably tuberculous.

Mr. W. G. SPENCER exhibited a case of Spina Bifida (Meningo-myelocele) two years after excision of the sac. The patient, a boy now two and a half years old, was operated upon when six months old. A firm scar now covered the groove and the legs were used well.

Dr. G. NEWTON PITT exhibited a case of von Recklinghausen's Disease. A female, aged 50 years, had at birth a tumour to the left of the sternum and later numerous painless subcutaneous nodules were noticed. New tumours had appeared from time to time, many within the last five years, which at first were firm and prominent and then, as they increased in size, they became softer. In 1877 a raised, pigmented, hairy mole with a molluscum tumour, four by four and a half inches, was removed from the right cheek. The patient had now a diffuse fibroid swelling of the left calf; a recurrence of the molluscum fibrosum tumour in the right cheek; and innumerable raised tumours, from a quarter to three-quarters of an inch across, scattered over the limbs and face and to a less extent on the body, the skin over them being not generally pigmented. Numerous small pigmented spots and freckles existed on the limbs and some larger areas of pigmentation which were slowly increasing. A fibrous mass, attached by a narrow base to the left side of the palate near the alveolus, could be seen hanging from the roof of the mouth. There were no obvious signs of involvement of the large nerve trunks.

Mr. O. L. ADDISON exhibited for Mr. A. E. J. BARKER a case of Lymphangiectasis with escape of Chyle. The patient, a male, aged 20 years, presented a cystic swelling above Poupart's ligament, a solid œdematous enlargement of the thigh, and a varicose condition of the lymphatics over Scarpa's triangle. From an opening in the latter position a milky fluid escaped in considerable quantities and if this was prevented by a pad enlargement occurred in the iliac region. The patient obtained relief by the periodical escape of the fluid which took place in a stream. The disease had been noted since the age of ten years.

Mr. CHARTERS SYMONDS exhibited: (1) a case of Simultaneous Ligature of the Common Carotid and Subclavian Arteries for Aortic Aneurysm in a man, aged 44 years; (2) a case of Bony Union after Fracture of the Patella without Wiring in a man, aged 39 years; and (3) a case of Popliteal Aneurysm after Ligature of the Superficial Femoral Artery in a man, aged 37 years.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Diseases of the Nose.—"Traumatism" in Relation to Malignant Disease.—Pigmentation and Diabetes.

A MEETING of this society was held on Oct. 21st, when Dr. A. BRONNER, the President, read an address on Diseases of the Nose in their Relationship to Pathological Conditions of other Organs. He said that nasal obstruction was very common in the north of England. In infants rhinitis was the commonest cause of nasal obstruction. The inferior turbinates of infants were relatively larger than in

adults and the slightest swelling of the mucous membrane caused obstruction. Babies often slept in wet napkins, crawled about on dusty and dirty floors, and they often suffered from rhinitis. In elder children post-nasal growths were the common cause of nasal obstruction. The results were very disastrous. There were arrested development of the chest and body and consequent frequent affections of the ears, throat, and lungs. Children with nasal obstruction were most liable to local and general infection. Under normal conditions germs and impurities contained in the inspired air were arrested and destroyed by the mucous membrane of the nares. In mouth-breathers the impure air passed over the already diseased tonsils and set up inflammation and infection there. There was often deformity of the upper jaw and palate. Most children with adenoids became permanently deaf if not treated in time. So-called nasal reflexes were very common. Many cases of asthma, hay fever, vaso-motor rhinitis, spasm of the glottis, tracheitis, cardialgia, megrim, and dysmenorrhœa were of nasal origin. In all these cases the nares should be examined most carefully and, if necessary, treated. Attention was also drawn to the paper of Fleiss who permanently relieved many cases of painful menstruation by the application of the galvano-cautery to the tubercle of the nasal septum and certain parts of the lower turbinates. Most cases of deafness were due in the first instance to rhinitis. In all cases of otitis media the nose and naso-pharynx should be examined carefully. Many cases of conjunctivitis, marginal keratitis, and epiphora were of nasal origin. Abscess of the orbit was frequently due to disease of the frontal or ethmoidal cells. Rhinitis often spread into the nasal accessory cavities and caused empyema of the same. This often spread into the brain and was a common cause of meningitis, optic atrophy, and diseases of the cavernous sinus and was frequently overlooked. Most cases of recurrent nasal polypi were due to discharge from the ethmoidal cells. Pus from the accessory cavities, especially the maxillary antrum, was often the cause of chronic septic poisoning, gastritis, recurrent tonsillitis, and peritonsillitis. One of the typical symptoms of cases of ozæna was the pale ashy complexion of the patient. This was due to the absorption of the nasal discharge and to the gastritis caused by the same. Headaches were very often due to nasal obstruction, rhinitis, and disease of one or more of the accessory nasal cavities. The President thought that it should be part of the routine practice of every physician to ask whether the patient suffered from nasal obstruction or discharge. If present this should be treated thoroughly.

Mr. W. H. BROWN read a short paper to introduce a new theory as to the causation of Malignant Disease. This theory was, he said, the outcome of many years' clinical experience, solely from which standpoint he approached the subject. He drew attention to the traumatic theory of the causation of malignant disease and used the term "traumatism" in its wider sense to include all cases of chronic irritation. Both traumatism and inflammation always caused an alteration in the local vascularity and he believed that the explanation of many, if not all, forms of malignant disease would ultimately be found in this "alteration of local vascularity" occurring as a result of "traumatism." In his experience a history of chronic irritation or preceding inflammation was found in malignant disease—frequently in certain situations, invariably in others. Striking examples of malignant disease resulting from chronic irritation were furnished in his experience by carcinoma of the tongue, of the uterine cervix, and of those portions of the intestinal canal which were most exposed to such a cause—i.e., the stomach, the cæcum, the flexures, and the rectum.—Dr. THOMAS CHURTON, Dr. WILLIAM FEARNLEY, Dr. F. W. EURICH, Dr. A. H. BAMPTON, and others took part in the discussion which followed.

Dr. W. H. MAXWELL TELLING read a paper on Pigmentation and Diabetes. He stated that the condition to which von Recklinghausen in 1899 gave the name of hæmochromatosis included many clinical varieties, according as it occurred with or without melanodermia or glycosuria. This allowed the inclusion of those cases of "*diabète bronzé*" of the French physicians which were now regarded as pathologically identical. This latter affection was distinctly rare, there being but 26 recorded cases, to which Dr. Telling added notes of two that had come under his own observation. One of these, that of a woman who had hypertrophic cirrhosis of the liver, melanodermia, and moderate diabetes, and was still living, was especially interesting as being the first case noted as occurring in the female. In briefly commenting on the pathology of these allied conditions it was shown that the diabetes must be regarded as merely a terminal and not even essential condition instead of being viewed as the primary lesion as formerly. As to whether hæmochromatosis was a distinct morbid entity it was not so easy to determine as pigmentation occurred under a number of conditions, as cirrhosis of the liver and pancreas, and again in diabetes, as an example of which the speaker showed a liver grossly pigmented from diabetic siderosis.

Various cases and pathological specimens were shown by Dr. J. B. HELLIER, Mr. G. C. HAYES, Mr. BROWN, Dr. E. F. TREVELYAN, Dr. T. H. HUNT, Mr. H. LITTLEWOOD, Dr. S. M. HEBBLETHWAITE, Dr. S. G. SCOTT, Dr. CHURTON, Dr. J. IRVING, Mr. B. G. A. MOYNIHAN, Mr. W. GOUGH, Dr. O. C. GRUNER, and Dr. TELLING.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The opening meeting of the session of this society was held on Oct. 18th.—The President for the current session, Mr. C. F. M. Althorp, delivered his inaugural address entitled "Wounds: Ancient and Modern." After briefly sketching the treatment of wounds in prehistoric times, the President referred to the early works of Hippocrates and Galen. The great point in their teachings was the necessity for suppuration in the healing of wounds. Hippocrates laid down the law that in cases of cancer operation should not be performed before ulceration had intervened and the enormous influence which he exercised for so many centuries would cause this dictum to be accepted to the great disadvantage of many generations of patients. Coming down to later times, it was easy to understand how gradually surgery became separated from medicine. Dr. Clifford Allbutt had said that "for many centuries there was a procession of visionary physicians to whom surgery was common and unclean" and in consequence of this the practice of surgery got into the hands of operating barbers, hernia specialists, and other irregular practitioners. Those who now practised surgery should take care that at times they made use of the inhibitory action of the brain in restraining rather than in coöperating with the hand. As regarded the use of ligatures, although Ambrose Paré was generally credited with introducing them, yet they knew that Galen used linen-thread ligatures, and a case was quoted in which he removed "strumous glands with the knife when not situated near large vessels." Wounds continued to suppurate as a matter of routine until quite recent years. There were some delightful descriptions of the surgery practised in Guy's Hospital in the eighteenth century and the early years of the century following in the surgical works of Samuel Sharp and of Sir Astley Cooper. The former, speaking of abdominal wounds with injury to the intestine, said: "It is absurd to open the abdomen. The operation of stitching the bowels can only take place when they fall out of the abdomen and we can see where the wound is or how many wounds there are." In 1794 John Hunter wrote: "Many operations may be so performed as to admit of parts uniting by first intention but the practice should be adopted with the greatest circumspection. In cases of cancer it is a most dangerous attempt at refinement in surgery." Sir Astley Cooper said: "To dress a stump place three strips of adhesive plaster over the wound and one round the stump. On the fourth day remove one strip of plaster to let out matter." The same surgeon when speaking of ligatures said: "It would be an extremely desirable thing if any person invented a ligature composed of materials which would admit of solution: he would greatly serve his profession." In 1810 William Hey of Leeds said: "I see no objection to the method of uniting the lips of the wound by the interrupted suture and constantly now make use of it." The history of the treatment of wounds, said the President, from the time of Sir Astley Cooper and Hey down to within the recollection of many at present living was one of disappointment. Whatever views might be held as regards the antiseptic treatment of wounds, it could be confidently asserted that without the work of Lister surgery would at the present day be in a very different position from that in which it was. The carbolic spray and many of Lister's other methods had fallen into disuse but they had been of service in drawing attention to the necessity of surgical cleanliness. Changes in wound

treatment took place from time to time just as we got changes in the fashion of dress. At the present time there seemed to be a general tendency towards a combination of antiseptic and aseptic methods. The great result of this evolution of present-day wound treatment was the healing of wounds by first intention under the first dressing and the consequence of this had been to give surgeons confidence in dealing with any organ of the human body which required surgical attention. At the same time the immense value of the discoveries of pathology and bacteriology must be recognised. The President then concluded by giving in minute detail the methods to be adopted at the present day in order to secure the healing of wounds by first intention, but let them not, he added, be like one of John Hunter's colleagues on the staff of St. George's Hospital, who, more than 100 years ago, seemed so satisfied with surgery as then practised that he confessed that he did not see where the art of surgery could be improved.—Mr. G. Handcock read notes of a case of Brain Tumour in a girl, aged five and a half years. The case was remarkable in that the symptoms were so few and so slight, resembling more a post-diphtheritic paralysis. There was no headache, vomiting, or optic neuritis. The palate was paralysed and the knee-jerks were slightly increased.—Dr. F. W. Eurich exhibited the brain from the same case, showing a large Sarcoma on the ventral surface of the medulla and pons.—The President, Dr. R. Mercer, Dr. A. Bronner, Dr. S. Johnstone, and Dr. A. W. Taylor discussed the case and Mr. Handcock and Dr. Eurich replied.—Dr. B. H. Slater read notes of a case of Calculous Anuria in a man. There had been repeated attacks of renal colic on the left side years ago but not lately, probably showing that the left kidney had ceased to act. In the present illness the colic was on the right side and at the operation the right kidney was found to be hydronephrotic and full of stones. It was incised and drained. The patient, who was in a uræmic condition, died shortly after the operation.—The President, Dr. A. C. F. Rabagliati, and Dr. Johnstone discussed the case and Dr. Slater replied.—Dr. Eurich showed some Microscopical Sections.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Oct. 21st, Dr. Fletcher Beach being in the chair. Four new members were elected and 21 were nominated for ballot at the next meeting.—Dr. C. O. Hawthorne showed a case of Hypertrophy affecting the Right Lower Limb. The patient was shown to the society in 1902 (Transactions of the Society, vol. ii., p. 114). The patches previously described as hæmorrhagic on the front of the leg ulcerated some twelve months ago and had never healed. The question that had to be decided now was the advisability of amputation.—Mr. A. Edmunds advocated a prolonged trial of hospital treatment before having recourse to amputation.—Dr. O. F. F. Grünbaum showed a Microcephalic Infant with Trophic Œdema of the Feet, and a sister and brother with Congenital Hereditary Trophic Œdema. The maternal grandmother of the two latter was also affected. The girl, aged seven years, showed swelling of both lower limbs from the knee downwards, with harsh, thick skin of normal colour. The œdema was hard but pitted on continued pressure. The size of the legs did not diminish on raising the feet but could be temporarily decreased by applying a rubber bandage. The child had not complained of pain. The brother, aged five months, showed a similar condition and the hypertrophy of the skin was more easily demonstrated. In both cases the œdema was symmetrical.—The cases were discussed by Dr. Beach, Mr. A. H. Tubby, Dr. F. Parkes Weber, Dr. J. Porter Parkinson, Mr. G. Pernet, and Dr. Hawthorne and Dr. Grünbaum replied.—Dr. L. G. Guthrie showed (by permission of Dr. G. Ogilvie) a case of Cerebral Diplegic Athetosis in a boy, aged six years, who had convulsions on the sixth day of an attack of measles last February. He was unconscious for seven weeks, was speechless, was paralysed on the right side, and had lost control of the sphincters. At present he was regaining speech, did not seem mentally deficient, and had some sphincter control. There was no hemiplegia. He could neither sit nor stand and had typical athetoid movements of the trunk and extremities.—Dr. Guthrie also showed a case of Polio-encephalitis (Cerebellar) occurring during measles last February.—Dr. R. Hutchison showed a case of Habit Spasm in a boy aged ten years. The spasm chiefly affected the muscles of the right side of the neck, had been present for two years, and had resisted all treatment.—Mr. Donald J Armour, Dr. G. A. Sutherland, Dr. Parkinson, Dr. C. H. Milburn (Hull), and Dr. Beach discussed the case.—Dr. Hutchison also showed a case of Bromide Rash in a child aged two years.—Mr. Edmunds showed a case of Infantile Paralysis with Permanent Involvement of the Abdominal Muscles. The attack had been very generalised and very severe. Now there was marked ballooning of the abdominal wall in the area corresponding roughly with the distribution of the eighth and ninth dorsal nerves.—Dr. Sutherland pointed out that without the history and the other evidence of infantile paralysis the case might have been mistaken for one of congenital absence of muscle in the abdominal wall, the cause of which was not well understood.—Mr. N. Bishop Harman showed a case of Congenital Bilateral and Symmetrical Dislocation of the Crystalline Lenses. He suggested opening the anterior chamber and removing the capsule of the lens by seizing it with Couper's capsule forceps.—Mr. Sydney Stephenson showed a case of Cerebral Degeneration with fundus changes in a boy, aged seven years.—Mr. J. P. Lockhart Mummery showed a boy, aged eight years, with a Dermoid Cyst of the Auricle in an unusual situation, rather too high up, in his opinion, to be due to a persistent portion of the intermaxillary cleft.—Dr. Edmund Cautley showed a child, aged three years, with Congenital Heart Disease, Paralysis of the Left Superior Rectus, and an Abnormal Artery on the Back of the Left Forearm. He thought the murmur due to a direct communication between the aorta and pulmonary artery or to a patent ductus arteriosus.—Dr. Cautley also showed a child, aged 21 months, with a microcephalic head, imbecility, a moderate degree of spasticity, and irregular movements of the limbs and trunk. He regarded it as due to a combination of microcephaly and cerebral changes.—Dr. Beach and Dr. Parkinson commented on the case.—Mr. Pernet showed a photograph of Trichotillomania and Dr. G. Carpenter showed a photograph of Extensive Herpes Zoster of the Left Arm.—Mr. R. C. C. Lucas read a paper on an Ill-developed Upper Lateral Incisor Tooth as a Forerunner of Hare-lip or Cleft Palate.—Dr. S. Gilford read a paper on Two Cases of Congenital Diaphragmatic Hernia. In each case the child was four months old and had had no abdominal symptoms. One was moribund on admission to hospital and was supposed to be suffering from sinus thrombosis. The other was admitted for bronchitis and paroxysmal dyspnœa. After death the third part of the duodenum, the whole of the small intestine, and the ascending colon had passed through an opening at the posterior part of the right half of the diaphragm. In neither case was there a sac. The cases were remarkable in their similarity to each other and their dissimilarity from other recorded instances.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The autumn meeting of the Northern and Midland Branch of this association was held on Oct. 13th at Parkside, Macclesfield, Dr. T. S. Sheldon being in the chair.—Dr. J. C. McConaghey read a paper on Dementia Præcox. Commencing with a reference to Kahlbaum's original description of hebephrenia and katatonia, he briefly explained the teaching of Kraepelin and the varieties of dementia præcox described by him—viz., the hebephrenic, the katatonic, and paranoid forms—and narrated the various symptoms of each form. He next gave an analysis of the adolescent female cases admitted into the Parkside Asylum, Macclesfield, during the past 12 years, limiting the age to 30 years, in all referring to 192 cases out of a total admission of 977 female patients, or 19·6 per cent. He pointed out the objections to including in the term "dementia" cases which might eventually recover and thought the old term "adolescent insanity" preferable, suggesting that it should be divided into three groups: (1) simple, (2) delusional, and (3) katatonic. The simple form should contain the excited and depressed cases in which marked hallucinations and delusions were not suffered from; the delusional form, those in which delusions and hallucinations were a prominent factor; and the katatonic form, those cases in which the muscular system was especially affected, such as in cataleptic, passive, and stuporous cases. He found that in the simple type 53 per cent. of the patients recovered, in the delusional type 47·6 per cent., and in the katatonic type 36·9 per cent. Of the whole 192 cases 38 remained under care, six being of the simple, 14 of the delusional, and 18 of the katatonic

types. At the conclusion of the paper a number of patients illustrative of the forms of adolescent insanity as described were shown and the clinical features were demonstrated.—Considerable discussion followed in which Dr. Sheldon, Dr. B. Pierce, Dr. T. Johnstone, Dr. W. F. Menzies, and Dr. J. Middlemass took part.—Dr. A. D. Thompson read a paper upon a case of Pyæmia treated successfully with antistreptococcic serum.—Dr. Thompson also showed three cases of Microcephalic Idiocy and gave detailed particulars of each case. The first case was that of a girl, aged nine years, with a strong family history of pseudo-hypertrophic paralysis on the mother's side. The circumference of the head was 17 inches. She was unable to recognise her mother and could not speak. She exhibited marked stereotypy, beating the floor with the left foot, but possessed much appreciation of music. The patient in the second case, a male, aged 31 years, was one of a family of ten children. Two of the patient's brothers were idiots. The cranial circumference was 17½ inches. The patient could utter a few words, had a fondness for music, liked to be taken notice of, and was attached to a cat. The third case was that of a male, aged 25 years, who had a brother who was an idiot. The cranial circumference was 17 inches. The patient was cleanly in habits, had no particular fondness for music and animals, was imitative, could speak but agreed with almost anything that was said, and had a peculiar gait like the festination of paralysis agitans. In none of the three cases was there any history of parental syphilis or alcoholism.—The remainder of the meeting was occupied by a discussion of the report of the statistical committee which involved a revision of the statistical tables used throughout the United Kingdom.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—The annual dinner of this old-established society was held on Oct. 27th at the Royal Pavilion, Brighton. The chair was occupied by the President, Mr. G. Morgan, and nearly 70 members and guests were present, constituting a record attendance. After the loyal toasts had been duly honoured Mr. T. J. Verrall in a remarkably neat speech proposed the toast of "The Mayor and Corporation of Brighton."—In responding the Mayor, Alderman E. M. Marx, who has just been elected chairman of the newly formed hospital board for Brighton, referred to the steps that had been taken in the creation of that board and availed himself of the opportunity of paying a high tribute to the medical practitioners of the town who, he said, whatever might have been their private feelings and opinions and however it might have affected them personally, had one and all done all that was possible to further the general interests of the Brighton medical charities.—The "Universities and Colleges" was proposed by Dr. Mackey, Professor Sims Woodhead who replied remarking that he was certainly in one sense qualified to undertake the task as he was connected with two universities and had examined for practically all the Colleges.—The toast of "The Society" was given by Sir William Broadbent who laid special emphasis on the value of such societies with regard to medical ethics.—Mr. C. J. Oldham, the treasurer of the society, replied.—Dr. A. Newsholme in submitting "The President" referred to Mr. Morgan's admirable work as a general practitioner, and the President having suitably acknowledged the compliment the toast of "The Visitors" was proposed by Mr. J. Turton and responded to by the Vicar of Preston, Mr. H. Rumney, and Mr. L. Holmes (representing the sister profession of the law). The first-named gentleman in the course of a very humorous speech remarked that he had at one time been a medical student and that he thought that if every candidate for ordination had to go through a short course of study at a hospital the friction that sometimes unfortunately arose between members of the two professions would be entirely obviated.—The proceedings closed with a vote of thanks, proposed by Dr. Gordon Dill, to the honorary secretaries, Dr. Hobhouse and Dr. Walter Broadbent, who were responsible for the arrangements for the dinner and who were heartily congratulated on the successful results of their efforts. During the dinner a pleasant programme of music was gone through.

NEWPORT MEDICAL SOCIETY.—A meeting of this society was held on Oct. 26th, Dr. T. Morrell Thomas, the President, being in the chair.—Mr. H. Gilbert Barling delivered an interesting and instructive address on the Diagnosis and Surgical Treatment of Certain Cases of Chronic Indigestion. After emphasising the fact that surgical interference was justified in only a small minority of cases, he described the conditions in which operation was indicated, the methods of diagnosis to be employed in recognising them, the various operations which might be performed, and the results obtained by their means.—On the motion of Mr. O. E. B. Marsh, seconded by Mr. J. McGinn, a hearty vote of thanks to Mr. Barling was passed by acclamation.

Reviews and Notices of Books.

Report on the Plague in Natal, 1902-3. By ERNEST HILL, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H. Cantab., Health Officer for the Colony. Illustrated. London: Cassell and Co., Limited. 1904. Pp. 192.

THE report upon plague in Natal by Mr. Ernest Hill, medical officer of health of the colony of Natal, contains a full and interesting account of the outbreak of plague in that colony and, in addition, describes many ably conducted experiments in elucidation of the bacteriology and pathology of the disease. Plague appeared in Durban, Natal, on Dec. 4th, 1902, and the last case occurred in the same town on August 15th, 1903. During the period 221 persons were attacked in Natal, of whom 162 died, a case mortality of 73 per cent. Of this number 201 cases, with 145 deaths, occurred in Durban alone. The disease, according to the report, was in the main spread by the agency of infected rats and mice. Part I. of the report deals with general questions appertaining to plague and is contributed by Mr. Hill; but Part II., dealing with the experimental work connected with the bacteriology of the disease, is written by Mr. H. Watkins-Pitchford, F.R.C.V.S., the Government bacteriologist. Mr. H. Cockerton and Dr. F. J. Allen give an analysis of 124 cases of plague treated in the Durban Hospital; and Dr. H. E. Fernandez is responsible for the excellent map and charts issued with the report.

The effect of the outbreak of plague in Durban has been of distinct benefit to the general sanitation of the city by compelling the attention of the municipal authorities to the sanitary defects. The way in which plague was dealt with in Durban is highly creditable to the medical men in charge of the outbreak and to the municipal authorities of the city. The report attaches a high value to Haffkine's method of preventive inoculation and some good results apparently were obtained by Yersin's serum as a protective measure. Mr. Watkins-Pitchford, assisted by Dr. L. G. Haydon, deals with the bacteriology of plague very fully. Many searching experiments were made, one of the most noticeable being in reference to the vitality and virulence of the plague bacillus. In testing the vitality of the bacillus rodents were confined in boxes carefully protected from all possibility of outside contamination. The boxes were first infected by rats suffering from the disease. When these died healthy rats, after the lapse of one month, were introduced into the boxes; the newcomers contracted the disease, showing a positive result, therefore, at the expiration of 30 days. When two months were allowed to lapse before the introduction of another batch of healthy rats the experiments proved negative, showing that after a period of approximately two months infected premises, straw, and so on, apparently ceased to be infective. Attempts to transmit plague to the lower animals after the method followed by Professor W. J. R. Simpson in Hong-Kong proved negative, and the assumption appears to be that the strain of bacillus used in Hong-Kong possessed a wider range of pathogenic properties than in the Natal experiments. The negative result of these transmission experiments in the case of domestic animals would seem to indicate that in Natal, at any rate, domestic animals do not play a direct part in the spread of plague. The authors

insist upon the untrustworthiness of microscopic appearances in coming to a definite pronouncement that the case is one of plague; cultural characteristics and the virulency of the organism must be tested in order to come to a trustworthy diagnosis. This report is not only a succinct account of plague in Natal but is a valuable contribution to our clinical, bacteriological, and epidemiological knowledge of the disease.

A Practical Guide to Sanitary Inspectors. By FRANK CHARLES STOCKMAN, Associate of the Sanitary Institute; with an introduction by HENRY R. KENWOOD, M.B. Edin., Professor of Public Health, University College, London. Second edition. London: Butterworth and Co. 1904. Pp. xx. + 296 + 15. Price 5*s.* net.

THIS is the second edition of a very useful little volume not only for a sanitary inspector with a certificate but also for those who possess no such certificate and who require a clear, simple statement of the powers and duties of sanitary inspectors and of the statutes under which action may be taken. The present edition consists of 19 chapters, each of which comprises a convenient synopsis of the subject treated, and has the advantage of an introduction by Professor Kenwood. But although the book as a whole should form a very useful addition to the library of the sanitary inspector the several chapters differ materially in merit. The opening sentence of Chapter I., which states that "the first Public Health Act was passed in 1848 and it requires the appointment among other officers of an inspector of nuisances," does not impress the reader favourably; and the statement on p. 2 that before the passing of the Local Government Act, 1888, the Local Government Board paid half the salary of the inspector of nuisances "when requested" is not happily put. It would have been better had the author explained that under the Act referred to the consent of the Local Government Board has still to be obtained to the payment of half the salary of the inspector of nuisances by county councils. In dealing with the subject of the preparation of sites for building purposes we find no reference under the heading of "Site" to the desirability of covering the whole area with concrete. Again, on p. 218 the model regulations of the Local Government Board which provide among other things that cowsheds shall be limewashed at least twice yearly are quoted, while on p. 224 the inspector is urged by Mr. Stockman to require limewashing at least three times in every year. There seems, too, to be some confusion with regard to the cubic space required in cowsheds. The 800 cubic feet for cows referred to by the author on p. 223 can only be enforced in cases where the cows are habitually confined to the cowsheds. But these little oversights—for oversights they evidently are—do not detract materially from the general excellence of the book, and if every sanitary inspector in the country would make himself familiar with the volume sanitary progress, especially in rural districts, should make considerable advance. Chapter XVIII. contains some useful forms and Chapter XIX. gives in parallel columns a synopsis of the Public Health (London) Act, 1891, and of the Public Health Act, 1875. The book is not too large to be carried conveniently.

Rontgen Ray Diagnosis and Therapy. By CARL BECK, M.D., Professor of Surgery in the New York Post-graduate Medical School and Hospital. With 322 illustrations in the text. London and New York: Appleton. 1904. Pp. 460, demy octavo. Price 18*s.* net.

IN this volume the practical applications of the Roentgen rays are treated from the clinical standpoint, the major part of the book being devoted to their employment for purposes of surgical diagnosis. With this in view the different regions of the body are considered in detail in a series of chapters which occupy 300 pages and are illustrated by 224 figures, many of which are of interest. The author's mode of dealing with the subject—viz., from the point of view of the diagnostic results to be obtained from the use of the x rays—will render the book very useful to the general practitioner.

The description of apparatus in the first part of the volume is meagre. No method of exact localisation of foreign bodies is described, though we are told that a hundred methods have been invented. We may infer that the author does not often require to adopt a localising method, and experience in this country also shows that exact localisation, in connexion with the operative removal of foreign bodies, is not much called for. The chapters on x-ray therapeutics give a good general account of this mode of treatment. They are profusely illustrated, though we observe that some of the figures appear to have little or no bearing on x-ray therapeutics.

At the present time the progress of x-ray therapy is delayed by the need of a trustworthy measuring apparatus which shall permit of accurate dosage. Suitable methods are just now being evolved and it is probable that by their aid the procedures of x-ray therapy may become changed in the next few years. The valve-tube of Villard, which facilitates measurements of current by arresting the ineffective discharges in the inverse direction through the x-ray tube, and the osmo-regulator of Chabaud, which permits of accurate adjustment of the degree of vacuum in the tube, are both destined to advance x-ray therapy to a notable extent.

The Sterilisation of the Hands: A Bacteriological Inquiry into the Relative Value of Various Agents used in the Disinfection of the Hands. By CHARLES A. LEEDHAM-GREEN, M.B. Birm., F.R.C.S. Eng., Surgeon to Out-Patients, Queen's Hospital, Birmingham; Surgeon to the Birmingham and Midland Hospital for Children; Assistant Lecturer in Bacteriology, University of Birmingham. London: Simpkin, Marshall, Hamilton, Kent, and Co.; Birmingham: Cornish Brothers, Limited. 1904. Pp. 102. Price 2*s.* 6*d.* net.

THERE is an absolute consensus of opinion that it is highly desirable that the hands of the operator should be sterile or as nearly sterile as possible, but there is the greatest diversity of opinion as to the best means of insuring this sterility. This book is an account of a careful application of bacteriological tests to hands "sterilised" according to the various methods advocated and this delicate bacteriological test demonstrates how inadequate the ordinary methods are in effecting sterility. The author utters a well-needed warning that a method which is very suitable for one skin may roughen another skin, and "any method which causes the hands of an individual to become rough and cracked stands at once condemned for habitual use by him, no matter how efficient the method may have proved to be on the hands of other persons." The main conclusions at which Mr. Leedham-Green has arrived are as follows. Even after prolonged washing with soap and water the number of microbes on the hands is not materially diminished. Soap with an excess of free alkali irritates the skin. Aqueous solutions of phenol, lysol, or perchloride or biniodide of mercury are powerless to disinfect the hands. Kelly's method of permanganate of potassium and oxalic acid gives inadequate results. Antiseptic soaps are practically valueless. Alcohol possesses a remarkable power of sterilising the hands and this is chiefly due to its hardening and fixing the surface epidermal cells, and 70 per cent. alcohol is best. The method approved by the author is this: (*a*) the hands are scrubbed for five minutes with soap and very hot water with a nail-brush and sterile sea-sand; (*b*) rubbed with methylated spirit for three minutes; (*c*) scrubbed for

a minute or two with 70 per cent. sublimate alcohol (1 in 1000); and (*d*) finally rubbed until dry and polished with a sterile cloth. As, however, no method guarantees sterility, Mr. Leedham-Green thinks it desirable that impermeable gloves should be worn, whether the wound be septic or aseptic. Without expressing any exact agreement with the author's conclusions, we put a high value on the researches recorded in this book and feel sure that a close adherence to the principles laid down will go far to minimise the risk of the hands of the surgeon or his assistants infecting a wound.

LIBRARY TABLE.

Modern Surgery, General and Operative. By JOHN CHALMERS DA COSTA, M.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital and to St. Joseph's Hospital, Philadelphia. Fourth edition, rewritten and enlarged. With 707 illustrations, some of them in colours. London, Philadelphia, and New York: W. B. Saunders and Co. 1903. Pp. 1099. Price 21*s.* net.—The title page tells us that in the present edition this work has been enlarged, and this is obvious, though the number of pages has not been increased—in fact, it has slightly diminished; but the use of a larger page and of a smaller size of type has enabled a much greater quantity of matter to be included. The book has been in great part rewritten, and a comparison of the present with the preceding edition testifies to the great alterations which have been made. We have spoken highly of previous issues of this work and we are equally pleased with this edition; it is fully up to date and forms a trustworthy text-book for general use.

The After-Treatment of Operations: A Manual for Practitioners and House Surgeons. By J. P. LOCKHART MUMMERY, F.R.C.S. Eng., B.A., M.B., B.C. Cantab., Hunterian Professor, Royal College of Surgeons of England; Surgeon to King Edward VII. Hospital for Officers, &c. Second edition. London: Baillière, Tindall, and Cox. 1904. Pp. 240. Price 5*s.* net.—A proof of the value of this work is afforded by the fact that the first edition was sold out in less than a year. As so short a time has elapsed since the appearance of that edition only minor changes have needed to be made. A section on smoking and drug habits in connexion with operations has been added, and Mr. Mummery considers that unless there is some obvious contra-indication, as in operations on the throat and pharynx, it is advisable to allow patients to smoke in moderation as soon as they express a desire to do so. Some new illustrations have been added and the chapters on abdominal surgery have been enlarged, especially the part dealing with the operation for appendicitis. The book should continue to meet with success.

The Differential Diagnosis of Syphilitic and Non-syphilitic Affections of the Skin, including Tropical Diseases: a Survey for Medical Practitioners and Students. By GEORGE PERNET, Assistant to the Skin Department, University College Hospital; late Pathologist to the Hospital for Diseases of the Skin, Blackfriars. London: Adlard and Son. 1904. Pp. 219. Price 6*s.* 6*d.* net.—In diagnosing any unusual form of skin eruption the first step often consists in determining whether the affection is syphilitic in origin or not and inasmuch as the result of this decision will materially affect the treatment it is of the first importance that this diagnosis should be correct. So varied, however, are the cutaneous manifestations of syphilis that it is often extremely difficult, especially for those who have but little knowledge of dermatology, to form a definite opinion on this point, so that it is of value to have a book to refer to in which this subject receives special consideration. Mr. Pernet's work is well designed and he has discussed with great fulness the chief syphilitic eruptions and the non-syphilitic manifestations with which they are liable to be confused. The book is written in a simple, pleasant style and is easy to read. It will prove of the greatest use to senior students and to medical men who experience difficulty in diagnosing syphilitic cutaneous phenomena.

JOURNALS AND MAGAZINES.

Caledonian Medical Journal.—The opening article of the October number is Dr. George Mackay's presidential address delivered at the annual meeting of the Caledonian Medical Society held in Edinburgh last July. It is of much bibliographical and antiquarian interest, being on the subject of Ancient Gaelic Medical Manuscripts and is profusely illustrated with excellent photographic reproductions. The Advocates' Library in Edinburgh has by far the richest collection of these documents—namely, 66 Gaelic manuscripts, of which 17 are wholly or partly medical. The Society of Scottish Antiquarians possesses a Gaelic translation of the "Lilium Medicanum" of Bernard Gordon, professor of physic in the University of Montpelier, who published it in the year 1305. Three manuscripts belonging to Professor Mackinnon were shown at the meeting, one of them being a pharmacopœia and another one a commentary on an Aristotelian treatise. In conclusion, Dr. Mackay suggested that the society should assist in the work of transcribing and translating manuscripts of this description.

The Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., F.R.S., D. J. CUNNINGHAM, F.R.S., G. S. HUNTINGTON, M.D., A. MACALISTER, F.R.S., and J. G. M'KENDRICK, F.R.S. Vol. XXXIX., Part 1. October, 1904. With plates and figures in the text. London: Charles Griffin and Co., Limited.—The chief articles contained in this number are: 1. The Derivation and Significance of Certain Supernumerary Muscles of the Pectoral Region, by George S. Huntington. Dr. Huntington recognises, three general groups, the first of which is the sternalis with underlying normal pectoralis major; the second, the sternalis with co-existing deficiency and abnormal construction of pectoralis sheet; and the third, the sternalis combined with, or in direct continuity with, other muscular variants of the pectoral region with or without coincident atypical development of the pectoralis major. There may be variants representing misplaced portions of the pectoralis major, or superficial pectoral muscles of unquestionably pannicular origin, or muscular variations of the thoracic region other than those derived from the pectoralis system. As regards the etiology of these variants he admits the occurrence of ontogenetic pectoral migration, preceding or coincident atypical secondary muscular or skeletal connexions, and closure of the mid-sternal fissure as influencing ontogenetically atypical disposition of superficial pectoral elements. This article is accompanied with 14 plates. 2. The Histology of Lymphatic Glands: the General Structure, the Reticulum and the Germ Centres, by T. L. Bunting, M.D. Edin., with five plates. The author considers that the cortical parenchyma is not divided into follicles but forms a continuous mass. The reticulum is composed of "beams" which are themselves composed in varying proportions of fibres partly elastic and protoplasm and there are germ centres which are rare or absent in the newly born animal. The animals whose glands he has examined are the ox, pig, sheep, rabbit, guinea-pig, cat, dog, badger, and man. 3. A Heart presenting a Septum across the Left Auricle, by Peter Potter, M.D., and S. Walter Ranson, S.M. 4. A Study of the Astragalus, by R. B. Seymour Sewell, B.A., with four plates. 5. An Œsophageal Pouch, with absence of Signs of any Pathological Cause, by S. E. Denyer, M.D. Cantab. 6. On the Morphology of the Human Intertransverse

Muscles, by J. Dunlop Lickley, M.B. Glasg. 7. The Mammalian Cerebellum, its Lobes and Fissures, by O. Charnock Bradley, M.B. Edin., with five plates. This is an original and valuable memoir on the cerebellum. 8. The proceedings of the Anatomical Society of Great Britain and Ireland are contained in this number.

The Leisure Hour. Sunday at Home. Girl's Own Paper.—These publications of the Religious Tract Society begin new volumes with their November numbers and the programmes of the respective forthcoming volumes give promise of healthy and instructive reading. In the first-mentioned journal there is a well-written illustrated article on the Living Mummies of Far Tibet, by Lieutenant-Colonel L. A. Waddell. Those interested in mediæval relics will welcome a paper on Some Curious Ecclesiastical Effigies in the *Sunday at Home*. Owners of motor cars and others may find a short summary of the law relating to automobiles written by a lawyer in the *Girl's Own Paper* of some use for reference.

Good Words. The Sunday Magazine.—Both these well-known publications (Isbister and Co.) also commence new volumes with their November issues. In *Good Words* Sir Wyke Bayliss, P.R.S.B.A., starts a series of articles on Great Painters of the Renaissance, the present instalment dealing with Leonardo da Vinci.

New Inventions.

A NEW TRANSFUSION APPARATUS.

THE accompanying illustration represents a new apparatus designed by Dr. George H. Burford of Queen-Anne-street, London, W., for the performance of either subcutaneous or intravenous transfusion. The saline solution to be injected is made in a half-pint glass jar and is stirred with an open-ended tubular stirrer having within it a thermometer graduated up to 120° F. For conveniently making a solution of the proper strength a stock of 30-grain "soloids" of chloride of sodium is provided. Two sharp-pointed hollow needles, one straight and one curved, are supplied for subcutaneous injection; they are connected to the cylindrical glass funnel by about three feet of india-rubber tubing, so that the requisite pressure is obtained by gravitation. The apparatus for intravenous transfusion is the same as is used for the subcutaneous method with the difference that a blunt-ended needle is inserted into the vein. The necessary instruments for finding and opening the vein and finally closing the incision are conveniently packed in a folding case. The following advantages are claimed for the apparatus—namely, (1) that it is simple in construction, so that every part can be kept surgically clean; (2) that it is always available for immediate use, only requiring the warm water for making the solution; (3) that it is easy to use; and (4) that the fluid is visible through the glass reservoir or funnel and can be kept at an equable temperature by means of the thermometer. The apparatus is contained in a compact case of moderate size, easily finding a place in the surgeon's or obstetrician's bag. The makers are Messrs. Mayer and Meltzer, 71, Great Portland-street, London, W.

Analytical Records FROM THE LANCET LABORATORY.

CARCECHAR.

(WOOLLARD AND BATTEN, 103 AND 104, CHEAPSIDE, LONDON, E.C.)

According to our examination "carcechar" consists of an absorbent wood charcoal treated chiefly with antiseptic tar acids. On extracting the tar acids a residue of porous charcoal remains which itself, of course, possesses deodorant properties. Wood charcoal, as is well known, and especially certain dense kinds, readily absorbs putrefactive gases. This absorption can hardly be expected to take place, however, when the charcoal is saturated with tar acid. The powder has limited uses but there is no doubt that it would be useful as a disinfectant sprinkled over various foul substances. It is suggested to place "carcechar" powder in a box in the ventilator of railway carriages or rooms in order to disinfect the air. In these circumstances charcoal itself would have little practical effect. The use of carbolised powder in special instances may be, however, a precaution but it is not pleasant to remain in an atmosphere constantly charged with the powerful smell of carbolic acid or its homologues.

BATTLE-AXE SCOTCH WHISKY.

(A. A. BAKER AND CO., 30, MINCING-LANE, LONDON, E.C.)

On analysis this whisky, which is described as "pure malt," gave the following results: alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to proof spirit 83·54 per cent.; extractives, 0·17 per cent.; and mineral matter, 0·66 per cent. The secondary products, calculated in grammes per hectolitre of absolute alcohol present, were as follows: acidity reckoned as acetic acid, 70·50; aldehyde, 14·00; furfural, 2·80; ethers reckoned as ethyl acetate, 55·40; and higher alcohols, 314·00. The total secondary products therefore amount to 456·70 grammes per hectolitre of absolute alcohol, a total which coincides with that given by genuine pure malt and pot-still whisky. The spirit is "clean" to the taste and has evidently been well matured. We believe its description to be accurate.

PHENOSOL.

(CHARLES W. SIMPSON AND CO., PRUSSIA-STREET, LIVERPOOL.)

"Phenosol" is an excellent detergent as well as disinfectant. It is a pink-coloured jelly exhibiting a marked alkaline reaction. It is readily decomposed on the addition of hydrochloric acid, fatty acids and phenols being liberated. It is free from inert tar oils which are useless for the purpose of disinfection. Phenosol is miscible with all proportions of water. From its composition there can be no

doubt of its germicidal efficiency and coupled with this is the most important advantage that it readily removes dirt. It is an excellent application for cleansing and disinfecting purposes on a large scale, for the floors and other washable surfaces of hospitals and other public institutions, for example.

(1) CITARIN; (2) MESOTAN; (3) HELMITOL.

(THE BAYER CO., LIMITED, 19, ST. DUNSTAN'S-HILL, LONDON, E.C.)

(1) Citarin is the sodium salt of anhydro-methylene citric acid, the essential property of which is that it readily yields formaldehyde which forms with uric acid an easily soluble combination. The compound formed is said to be undisturbed by dilute acids and it is concluded therefore that once it is formed it must remain largely in solution. Further, citarin contains citrate of sodium which, of course, is changed into carbonates in the system. It is said to be administered with decidedly good results in uric acid diathesis. (2) Mesotan has been employed in rheumatism and is stated to have afforded distinct relief when applied externally. It is the methoxymethyl ester of salicylic acid and is a yellowish-coloured fluid which is readily miscible with a fat basis. Mesotan is combined with olive oil and the mixture is rubbed gently on the affected part. Salicylic acid soon appears in the urine after rubbing mesotan upon the skin in this way. (3) Helmitol is again an interesting organic compound from which formaldehyde is readily liberated. It serves as a powerful urinary antiseptic, the urine under its administration assuming an acid reaction. Helmitol, therefore, is indicated in cystitis and pyelitis. It is described as the anhydro-methylene-citrate of hexamethylene tetramine.

ANTI-LARIA TONIC WATER.

(WHEELER AND CO., LIMITED, CROMAC SPRINGS, BELFAST.)

Anti-laria is an agreeable effervescent beverage designed for regular use by those exposed to malarial affections. It is said to be used extensively in tropical climates and in places where malarial fever is prevalent. We have seen the formula of the preparation which seems an excellent one, the principal ingredient, which our analysis has verified, being quinine. In certain circumstances the use of this effervescent water may be approved as a pleasant way of taking an antiperiodic and as a prophylactic measure, but it should obviously not be consumed indiscriminately or without medical advice. The addition of drugs to popular beverages is undesirable and not less so when these beverages are sold under the guise of a tonic water.

HAND-CUT TOBACCO AND CIGARETTES.

(THE ARDATH TOBACCO CO., LIMITED, 44, WORSHIP-STREET, LONDON, E.C.)

One unquestionable advantage of hand-cut tobacco is that it is relatively free from dust and irritating particles. It is leaf and nothing but leaf uninjured or unsoiled by mechanical treatment. It is surprising how much fine sand and dust is found adhering to the tobacco-leaf as imported and this sand and dust in the machine-cut tobacco are not eliminated. This matter is of some importance, since fine dust and other particles may easily give rise to irritation of the throat or other respiratory affections. In hand-cut tobacco the sand and fine particles separate during the cutting process and fall out and only the clean leaf cut into threads is employed for making the cigarette. In the machine-cut tobacco there is no such separation of dust and sand. Recent analyses which we have made show the very distinct difference between hand-cut and machine-cut tobacco in this respect. The latter contains more than twice as much sand, for example, as the former. Moreover, we have examined specimens of the dust and "shorts" eliminated during the hand-cutting process. The dust contains nearly 50 per cent. of sand, while the "shorts" contain upwards of 2 per cent. The specimens were sent to us by the above company which makes a special feature of hand-cut tobacco, whilst observing due hygienic precautions during its preparation.

INVALIDS BISCUITS (PREDIGESTED).

(W. GILBEY, 4, LOWER BROUGHTON-ROAD, MANCHESTER.)

These biscuits are made in accordance with the formula of a nurse who has made a special study of the dietetic requirements of invalids. The constituents are to some extent hydrolysed by the use of digestive ferments. We found that 12 per cent. of the biscuit was readily soluble in cold water. Further analysis gave the following results: moisture, 8·30 per cent.; mineral matter, 2·00 per cent.; proteid, 21·60 per cent.; fat, 24·90 per cent.; and carbohydrates, 43·20 per cent. The biscuits contain, amongst other things, eggs, and the fat extracted in our analysis exhibited the characteristics of the fatty matter of the egg. The biscuits are not only decidedly nutritious but easily digestible. They have been employed, it is stated, with good results in cases of impaired digestive function following illness.

EUMENTHOL JUJUBES.

(G. HUDSON, IPSWICH, QUEENSLAND. LONDON AGENCY: W. F. PASMORE, 320, REGENT-STREET, W.)

These jujubes contain well-known volatile antiseptics and their purpose is to act as a bactericide in the mouth. According to bacteriological experiments this result is likely to be gained, as in the experiments tried the jujube proved to be as effective bactericidally as is creosote.

HUBBARD'S DIABETIC BREAD.

(W. HUBBARD, PARTICK, GLASGOW; AND G. COSTA AND CO., MELBOURNE HOUSE, PUDDING-LANE, EASTCHEAP, E.C.)

This bread gave satisfactory results on examination and according to our analysis was free from starch and sugar. It is composed of somewhat coarse particles resembling chopped nut. The flavour is very good and superior to that of many of the foods intended for diabetic patients. The slices of bread submitted to us had a tendency to become damp and to crumble. This tendency, however, can be readily remedied by taking care to keep the bread in a dry place.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the stated annual meeting of the Royal College of Physicians of Ireland, held on Oct. 18th, the following officers were elected for the coming year:—President: Dr. W. J. Smyly. Vice-President: Mr. E. E. Lennon. Censors: Mr. Lennon, Dr. Alfred R. Parsons, Dr. J. H. R. Glenn, and Dr. W. R. Dawson. Additional examiners to take the place of an absent censor or examiner—medicine: Dr. W. J. Thompson; midwifery: Dr. W. C. Neville; medical jurisprudence and hygiene: Mr. A. Nixon Montgomery. Examiners for the licence to practise midwifery: Mr. A. J. Horne and Dr. Henry Jellett. Examiners for the Membership—clinical: Dr. J. Magee Finny and Mr. Lennon; practice of medicine: Dr. Walter G. Smith and Dr. Parsons; and pathology: Dr. H. C. Earl and Dr. A. C. O'Sullivan. Additional examiners under the conjoint examination scheme—biology: Dr. E. MacDowel Cosgrave; chemistry: Mr. E. Lapper and Dr. N. M. Falkiner; physics: Dr. George J. Peacocke and Dr. W. A. Winter; pharmacy, materia medica, and therapeutics: Dr. H. C. Drury and Dr. Martin Dempsey; physiology: Dr. Earl; pathology: Dr. O'Sullivan; medicine: Mr. J. Murphy and Dr. R. Travers Smith; and hygienic and forensic medicine: Dr. Henry T. Bewley. Examiners for the conjoint diploma in public health—meteorology: Sir John Moore; hygiene: Dr. Bewley; and chemistry: Mr. Lapper. Extern examiners in preliminary education: Professor W. E. Thrift and Mr. William Kennedy. Representative on the General Medical Council: Sir John Moore. Representatives on the committee of management: Dr. Finny, Dr. Smith, and Dr. James Craig. Treasurer: Dr. Bewley. Registrar: Dr. Craig. Librarian: Mr. R. G. J. Phelps. Architect: Mr. A. E. Murray. Law agents: Messrs. Stephen Gordon and Son. Agent to the trust estate: Mr. C. U. Townshend. Dr. J. A. Matson, Dr. T. P. C. Kirkpatrick, and Dr. F. C. Purser were elected Fellows of the College.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 5, 1904.

King Edward's Hospital Fund and Hospital Administration.

THOSE responsible for the management and distribution of King Edward's Hospital Fund have made an important announcement. In consequence of their attention having for some time past been called to the financial relations of certain of the London hospitals to their medical schools they have referred the consideration of the questions involved to a committee consisting of Lord WELBY, Sir EDWARD FRY, and the Bishop of STEPNEY. The special aspects of the case have been accurately suggested to these gentlemen by the terms of the reference made to them and communications from the public intended for them can be addressed to King Edward's Hospital Fund. This invitation is intended, and is properly intended, to give to those whose persistent attacks upon the administration of hospital funds have had something to do with the institution of the inquiry an opportunity for airing their views. It will also enable others, who may choose to do so, to uphold contrary opinions. Whether any satisfactory assistance will thus be received by the committee is extremely doubtful, but at any rate a free vent will be provided for the expression of acute feeling. An agitation has been carried on, as everyone is aware, for some time by those whose ultra-humanitarian views have led them to place the discountenance of experiments upon living animals before every other object which benevolence can propose. This agitation has been prosecuted with a fanatical zeal which has caused its converts to lose all sense of proportion and all power to weigh the value and amount of human suffering saved against the value and amount of brute suffering caused. Its protagonists have not attempted to ascertain by inquiry and discrimination what the amount of brute suffering taking place under the sanction of the law may be. We have only to refer to the evidence given in the recent action of BAYLISS *v.* COLERIDGE to see this. It may well be pointed out at the threshold of the investigation which Lord WELBY, Sir EDWARD FRY, and the Bishop of STEPNEY are about to hold, that their efforts are not likely to serve one useful end—viz., the conversion of the sentimental crank. Before there is any report upon which to comment, and when we can only hold our private opinions as to whether it will take one form or another, we can safely prophesy two things. The first is that if the report contains useful suggestions for the amendment of hospital administration the indicated reform will gladly be carried out by the institutions. The second is that if it contains findings of fact or statements of opinion whereof the antivivisectionists disapprove that sect will neither accept the one nor acquiesce in the other.

The questions propounded for the consideration of the committee contain no direct allusion to research work as practised in the medical schools of hospitals or otherwise. It has been alleged that money has been, and is being, spent in hospitals upon objects of which the donors would not approve and which they did not intend to further, these objects being connected with the maintenance of schools for the training of students in medicine and surgery and not solely and exclusively with the supplying of lodging, board, and medical attendance to necessitous patients. The first point submitted to the committee is: "Whether any, and, if any, how much, money given or subscribed for the relief of the sick poor to the 12 London hospitals having medical schools is contributed directly or indirectly by those hospitals or any of them for the maintenance of medical education." We venture to predict that in examining the accounts of the medical schools the committee will find little, if any, evidence of support from the general funds of the London hospitals. The medical schools of London are largely maintained by the fees of students and in many cases where these have fallen short lecturers have gone unpaid rather than fail to deliver instruction which in any case is not highly remunerated. Whether all the income of a hospital is necessarily contributed by its donors with a view to the direct relief of the suffering poor by board, lodging, and medical attendance, and in no degree for the sake of the indirect benefit derivable from the provision of a future generation of medical men, is another question. If a medical man subscribes or leaves money to his old hospital, is it to be assumed that he intended to help only in the upkeep of its wards and to refuse all assistance to the schools in which he was trained should these require his aid? Is it to be assumed that all lay donors and testators who have benefited hospitals have been entirely oblivious of the importance of the medical school in lessening the tale of human suffering? We are making no sort of apology for any errors of administration that may have occurred, but we hope that the committee will make quite clear what is to be regarded as a malversation. Sir EDWARD FRY is, we believe, too able a lawyer to allow a question suggested by the first line of the reference before him to be settled by an assumption and without proper inquiry.

The second question referred is whether and to what extent the medical schools make direct or indirect return to the hospitals for any contributions which they may receive from them. It seems hardly necessary to take evidence and deliberate on the question whether the devoted labour bestowed by the pick of its students, sometimes throughout their lives, in furthering the objects of the hospital which trained them is a direct or an indirect return for benefits received, but all medical men will welcome a definite pronouncement upon the point. The third question for the consideration of the committee is: "Whether in the event of the committee finding that any hospital contributes to its medical school a sum in excess of the return it receives from the medical school there are any special considerations advanced in justification of such expenditure or any general considerations which would

apply to all hospitals having medical schools." This last, no doubt, is the matter on which the answer of the committee is most required. Their reply to all the questions will, no doubt, be a carefully considered, well-reasoned document, for they have been admirably selected for the task that lies before them, but that the report will in any way close the mouths of those who have slandered the hospitals should it run counter to their prejudices cannot, we fear, be expected.

The Housing of the Poor in Towns.

IT has long been manifest to all who have given thoughtful consideration to a question which has lately been brought into prominence in this country, the question of the alleged physical deterioration of a large proportion of our people, that one of the chief elements to be considered lies in the oftentimes defective dwellings of the wage-earning classes. From this point of view it has lately received considerable elucidation in the city of Glasgow, where a special commission to investigate the housing of the poor has been appointed by the corporation and has just issued an exceedingly valuable and instructive report. From this report it appears, as indeed might have been expected, that the existence in the city of a large number of over-crowded, dirty, and defective dwellings is less to be attributed to the absence of legislative powers than to the manifest difficulty of applying them, a difficulty primarily traceable to the fact that the present inhabitants of these dwellings cannot be prevented from occupying space. They must be somewhere; and if their present habitations were destroyed, or were even so improved as to command a much increased rental, no available places of shelter would be left for them and they would be cast destitute upon the streets. The practical effect of this consideration, acting upon the minds of those whose duty it is to enforce or to administer the law, has been so to attenuate its provisions as to render them practically valueless and to leave almost unchecked the evils which they were designed to prevent. One of the officials of the corporation, for example, says in his evidence that in addition to houses which are distinctly illegal, there are some which, from want of light, want of proper sanitary conveniences, want of ventilation, and other reasons, are not fit for human habitation and could be closed under a stated section of the Glasgow Police Act. He adds that, as one of the certifying officers under that section, he feels compelled to take into consideration the want of sufficient and suitable accommodation for the occupants who might and ought to be displaced from such houses, and that he hesitates about certifying them as unfit for habitation, although if there were places to which the people could go he would not have the same difficulty. Another official, speaking of "a large number of damp and dilapidated houses, 500 at least," which could be closed under Section 32 of an Act of 1890, continues: "When I am satisfied that there is accommodation for this class of the population at anything like their present rentals I will not be inclined to withhold the powers we possess under the section." This gentleman was asked whether the Act imposed upon him the duty, before giving a certificate of illegality, of considering the question of other accommodation for the displaced; and, while replying in the negative, he added, "But I think common-sense does." An inspector of the sanitary department declared that complaints of overcrowding, when brought before the magistrates, were dealt with "in a very lenient way." He gave as an example the case of a room licensed for two and a half adults (a child under ten years of age is reckoned as half an adult), and found to contain six and a half, in which, although it was a second offence, the law-breaker was fined only half-a-crown, although the full penalty was 20*s.* or 14 days. He went on to admit that perhaps the people deserve leniency. "They are very hard pressed."

The actual physical conditions brought about by the combination of a deficiency of dwellings with a laxity (perhaps an inevitable laxity) in the enforcement of the law, would seem incredible if they were described in the pages of a romance. Certain houses in Glasgow are "ticketed"—that is to say, each room in them is licensed for a certain number of inmates and these rooms are liable to nocturnal visits from the authorities to see whether the proper number is in any case exceeded. The number permitted is based upon an allowance of 400 cubic feet of air space for every adult, or for every two children under the age of ten years. The arrival of the inspectors at night is often followed by ingenious attempts at the hasty concealment of supernumerary inmates. In the worst case quoted the officers took seven persons from an adjoining roof and these made up a total of 11 in a room which contained only 880 cubic feet. On several occasions two tiers of people have been found in one bed—one on the boards or on the mattress, the bed then flung over them, and another living tier on the top. In one case a son aged 22, a young woman aged 20, and a girl aged 16 years were found between the bed and the mattress. The father was lying above the son and the younger members of the family were above the girls. "The eldest girl was as naked as the hour she was born." The mother was on her feet, having risen to open the door. The officers, after knocking, saw through chinks in a shutter that something was being done in the way of rearrangement. On gaining admission they were told that the room was occupied by three persons—husband, wife, and two children under ten years of age—but on turning up the mattress they made the discoveries mentioned. It can be no matter for surprise that the relation between housing of this kind and the character and habits of the people was referred to by many witnesses. The coexistence of such wretched conditions with excessive drinking and with gross immorality was unmistakeably evident and it was constantly declared that the poverty, filth, and misery that prevailed were directly traceable to the drinking habits of the tenants. We should be inclined to surmise that the assigned order of causation might in some cases be reversed and that some of these poor wretches might have sought in drink occasional forgetfulness of their misery. There can, however, be no question of the soundness of another opinion which was frequently expressed to the effect that the existence of many of the habitations described was "a direct menace to the public health."

The general recommendations of the report are of a kind which follow, almost of necessity, from the conditions

which it describes. They are, practically, that a better enforcement of the law should coincide with endeavours, both corporate and private, to supply the accommodation which the population of the city requires and that these endeavours should be aided by a relaxation of the provisions of the Building Acts which would permit the erection of cheaper dwellings to be let at rents within the means of those engaged in poorly remunerated forms of unskilled labour. All this might, no doubt, be done with advantage; but when it was done it would scarcely do more than touch the fringe of the great problem which is presented to us by the existence of degradation so lamentable as that which has been described and so certain to be a source of an ever-increasing population of a character which is at once a cause of weakness and of disgrace. The population of the city of Glasgow, at the last census, was 776,967, and of this number 15·89 per cent. lived in one-room habitations, and 49·95 per cent. in two-room habitations, making 65·84 per cent. who were housed under conditions rendering decency, if not impossible, at least difficult of attainment in the majority of instances. Exceptions must be made, perhaps, in favour of old couples, or of the newly married before the advent of children, or of single women living alone, or of two women living together, but such cases would scarcely be sufficiently numerous to produce much effect upon the general condition of overcrowding and of all the manifold ills which it entails. Is not the time at least approaching when the nation, in the interests not only of physical and moral health but even in the interests of safety, will be compelled to exercise control over the conditions of living of its proletariate and to subject the individuals composing it to some sort of discipline for the general good? Hitherto, the proletariate has been equally courted by rival politicians, but has not the time come when it should be equally governed by them? A coöperative society in Glasgow which has been building improved dwellings, and making upon them a steady return of 4 per cent., appears to plume itself upon having also "restored the franchise to 97 out of 100 tenants." It hardly occurs to us as probable that all the 97 votes would be cast in accordance with the requirements of an enlightened public spirit, or that they would be likely, for example, materially to assist in the diminution of drunkenness. Within recent memory it has been possible for a statesman to boast that the nation "had drunk itself out" of a financial difficulty; and we are able to-day to recognise that in doing so it assisted to create a far more serious one. If the conditions which are described as existing in Glasgow, and are only too well known to exist also elsewhere, are ever to be brought under control the offence of drunkenness must be sternly and effectively repressed, not so much, we think, by restrictions upon the sale of intoxicating drinks as by the sharp and summary punishment of all those who abuse them. The time has come when rival politicians must cease to be cap in hand before the alcoholic and no reasonable person can doubt that the repression of inebriety would be followed by the disappearance of many of the most flagrant of the evils attendant upon ignorance and poverty, evils which now operate, in so fearful a degree, to undermine the strength and to diminish the intelligence of the lower classes of the community.

The Etiology of Dysenteric Diarrhœa in Infants.

DR. H. COOPER PATTIN, the medical officer of health of Norwich, has compiled some interesting statistics concerning the diet of infants who died from diarrhœal diseases in the area under his jurisdiction between August 1st and Sept. 21st of this year. The investigations—a *résumé* of which has just reached us—were made for the medical officer of health by a lady inspector who instituted a house-to-house visitation for the purpose of the inquiry. The number of cases included in Dr. PATTIN'S statistics only amount to 70, not a number from which any general deductions can be drawn, but the inquiry is of value as showing that in this case at least some relationship can be traced between improper methods of feeding and mortality from diarrhœal diseases among infants—thus corroborating the views expressed by the medical officers of health of Birmingham, Salford, Stockport, Southend, and of several other large centres of population. Of the 70 infants who died from causes referable to diarrhœa only seven were exclusively breast-fed, 19 were partly breast-fed and partly bottle-fed, while 44 were variously fed on boiled milk, boiled milk and barley water, and boiled milk with the addition of a patent food. Without statistics to show the relative proportions of infants who were fed from the breast and by means of artificial substitutes it is impossible to draw any trustworthy inference as to the general incidence of diarrhœal diseases in these two classes of infants. However, it is probable that in a borough of the character of Norwich a very considerable proportion of infants are breast-fed and consequently it is reasonable to suppose that these statistics do actually support the view which Dr. PATTIN evidently wishes to convey—namely, that the mortality of infants from diarrhœal causes is greater among bottle-fed than among breast-fed infants. These investigations further elicit the information that in 23 out of 44 bottle-fed cases the milk was kept in the house over night and that in practically every instance the milk was preserved in uncovered receptacles in the living room. In 51 instances insanitary feeding bottles with long india-rubber tubes were employed. These revelations disclose a most deplorable state of ignorance on the part of the mothers in this district but it is improbable, if similar careful observations were made in other urban districts, that a higher degree of enlightenment on the question involved would be discovered.

Investigations on the subject of the etiology of summer diarrhœa in England, although clearly pointing to the association of certain specific bacilli and the incidence of the symptoms, nevertheless leave a great number of points in doubt, and these hiatuses in our knowledge chiefly refer to the method of entrance of the bacillus itself and to the conditions favourable to its development in the intestinal tract. Other matters that are undecided in connexion with this question are the natural distribution of the bacilli outside the body and the part which the atmosphere, the water, and the milk respectively play

in their further dissemination. There is, indeed, evidence for believing that flies or other insects may be the media of infection. It is, however, by systematic inquiries, such as those carried out by the medical officer of health of Norwich, that we may expect ultimately to find an answer to such questions and it is gratifying to see that many of our officers of health are taking up the question of infant feeding with zeal. In America the Rockefeller Institute for Medical Research has recently undertaken to support an investigation with a view to the elucidation of the bacteriology of summer diarrhœas in children and to defray the expense of testing upon infants suffering from one or another of the varieties of the disease the value of an anti-dysenteric serum obtained from horses which have been previously inoculated with the bacillus dysenteriæ. The report of the investigations which have so far been concluded and which has been edited by Dr. SIMON FLEXNER and Dr. EMMETT HOLT has been published recently and was reviewed in our columns. Its perusal leaves little doubt that most, if not all, serious dysenteric diarrhœas in infants are associated with, if not directly due to, the presence of either the Shiga or Flexner-Harris variety of the bacillus dysenteriæ; indeed, in the extended researches which have been conducted to test the value of the anti-dysenteric serum it has been assumed that this causal association does exist. Although the results so far obtained from the use of the anti-dysenteric serum do not permit of any very definite expression of opinion as to its therapeutic value or general trustworthiness, nevertheless they are sufficiently encouraging to justify a continuation of the researches on the lines hitherto pursued by those investigators who have been working in coöperation with the Rockefeller Institute. Since at present there are no means at hand of clinically distinguishing the different varieties or, perhaps more correctly, strains of bacilli to which the infection in any individual case may be due it has been found advisable to employ a polyvalent serum obtained from animals immunised against the two more definite types so far recognised—namely, the Shiga and the Flexner-Harris bacilli. For although the Shiga serum is not without some effect in infections with the Flexner-Harris type of organism and *vice versâ* the effect is noticeably better when serum is employed which is possessed of a polyvalency.

With a view to the prevention of the disease this report from the Rockefeller Institute well deserves attention, since it establishes beyond a doubt that these dysenteric diarrhœas are contagious, although the degree of their contagion and the method of the distribution of the micro-organisms concerned are not yet proved. In summing up the clinical conclusions which may be drawn in reference to the question of infection Dr. HOLT says: "From present experience a high degree of contagion does not seem probable; the spreading takes place most likely through the discharges; this calls attention to the necessity for disinfection and the closest attention to prevent contamination of food or water by persons handling the child's napkins." This recommendation is of special interest when taken in conjunction with Dr. PATTIN'S observations—namely, that in the great majority of fatal cases some gross act of negligence is usually discoverable, either as regards the manner in which the milk is handled and kept, or as regards the use of unboiled water and insanitary feeding bottles. Acts of carelessness in respect of these details will probably be combined with carelessness in other directions—as, for instance, in the disposal of the ejecta and the washing of the napkins, so that in one and the same household all the conditions may conceivably be present for the transmission of infective material from the sick child to the otherwise healthy infant. The fact that the Shiga or Flexner-Harris bacillus appears to be a more or less normal constituent of the bacterial flora of the alimentary tract in infants may explain some of the cases of apparent autogenous origin. In these cases it may be assumed that the natural powers of resistance have been reduced to the danger point by various debilitating conditions. Such a view, however, does not in the least lessen the advisability of taking every precaution to prevent the further dissemination of the virus, and further it emphasises the necessity for maintaining the powers of resistance of the infant at the highest pitch possible by the best methods of feeding.

Annotations.

"Ne quid nimis."

DIFFICULTIES UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

EVER since the introduction of compulsory notification of infectious disease cases have been numerous in which practitioners have resented several of the methods followed by local authorities. These conflicts have taken a variety of forms but they usually originate in, and centre round, questions connected with the diagnosis of the notified disease. Diagnosis, it must be admitted, has its social and legal as well as its clinical perplexities. Some diseases are seldom mentioned by name in the domestic circle and many others are by the average individual veiled under discreet euphemisms. In ordinary cases it is not the duty of strangers to probe the facts, but when the disease happens to be a notifiable one a number of interests, some of them conflicting, are at once affected. A person falls ill and is declared to have a feverish cold or tonsillitis or nettlerash—a tentative diagnosis and often given very guardedly. Not much is thought of the matter until the family is alarmed by the appearance of what is evidently a similar case either in the same household or in that of friends or neighbours. Then the diagnosis is revised in the light of recent events and the disease is acknowledged to be scarlet fever, or diphtheria, or measles, or small-pox. The facts now become public property and people may say that the medical adviser is greatly to blame, for if he had understood the nature of the first case the relatives and friends would have been warned in time and the further extension of the disease might have been prevented. Of course, cases occur where medical men are too positive in their first impressions, but as a rule it is the friends of the patient who jump to pleasing conclusions before a certain medical opinion can be given. The position of a medical man who has too hastily pronounced a case to be infectious and has set in motion the machinery by which the patient is removed to the isolation hospital is, again, a very uncomfortable one. Several possibilities then present themselves, one of which is that the patient may shatter the diagnosis by the involuntary "control experiment" of contracting the illness which he was supposed to have had at the time of admission. In the hope of lessening these mishaps some medical officers of health have systematically themselves examined

notified cases prior to removal to hospital—an injudicious policy, for the willing coöperation of the medical profession and the general public with the sanitary authorities is essential in any successful scheme of disease prevention, and medical officers of health might foresee that their visits to private houses would not be regarded with favour in any quarter. Misunderstandings of various kinds became so frequent after the passing of the Act that nearly ten years ago—viz., in January and February, 1895—a series of articles on the subject appeared in THE LANCET, which have since been reprinted in pamphlet form. In a chapter entitled, "The Nature of the Visit by the Medical Officer of Health," a concluding paragraph expressly states that the medical officer of health has no right to inspect patients, that such inspection is as a rule very undesirable, and that it should not be contemplated, even when it is necessary, except after communication with, and if possible in coöperation with, the medical practitioner in attendance on the case. But that the practice still obtains among some medical officers of health is shown by a correspondence which we have just received from the President of the Medical Defence Union, Limited. In one of these letters, which are dated in October, 1904, and addressed by the Local Government Board to a borough council and a rural council respectively, the Board says:—

> ..... In the great majority of notified cases of infectious disease it appears to the Board to be both unnecessary and undesirable that a medical officer of health should make such examinations. Special cases may, however, arise from time to time, as where the disease is suspected to be one which would threaten serious danger to the community or where the attendant circumstances might call for exceptional action, in which it is desirable that the medical officer of health in order to be better able to advise his council should make a personal examination of the patient. A notified case of chicken-pox in an adult or adolescent or occurring under circumstances favouring the spread of infection is an instance in point, many outbreaks of small-pox having originated in cases at first mistaken for chicken-pox. Indeed, it is for the purpose of facilitating the detection of such unrecognised cases of small pox that chicken-pox has in many districts been made compulsorily notifiable during the recent prevalence of small-pox. In this connexion I am to remind the Boro Council of the Board's circular letter of Dec. 27th, 1901. *It must, however, be remembered that a personal examination can only be made with the consent of the patient or of those having charge of the patient; and it is desirable that the medical practitioner in charge of the case should always be communicated with and that his coöperation should be secured where it is possible to do so without involving undue delay.* The Board would point out the importance of exercising tact and discretion where a reconsideration of the diagnosis upon which the notification of the case has been based is involved.

The Local Government Board here exactly state the proper legal and professional views.

IS TIMBER PRESERVED WITH CORROSIVE SUBLIMATE INJURIOUS TO HEALTH?

THIS question has been addressed to us by a correspondent who states that within recent years, owing to the rapidity with which modern buildings are being constructed and the consequent use of immature and imperfectly seasoned wood, a great demand for perchloride of mercury for destroying the fungus merulius lacrymans, popularly known as "dry rot," has arisen. It appears that formerly a process known as "Kyanising" (after the name of the patentee Kyan) was employed which consisted in immersing the timber in a bath of corrosive sublimate. As far as preserving goes the method has been improved by placing the wood in a chamber in which the air and moisture are partially removed from the wood cells and then an alcoholic solution of corrosive sublimate is injected under pressure. Similar processes have been employed in which, however, far less powerful substances than corrosive sublimate have been used. Such are calcium chloride and sulphate of iron, chloride of zinc, tar, and creasote, acetate of iron impregnation being effected in a strong cylindrical vessel connected with an exhaust pump. In this vessel a vacuum is first produced and then a high pressure is applied so as to force the liquid as far as possible into the pores of the wood. The use of perchloride of mercury for the purpose suggests at first sight a danger owing to the volatile nature of mercurial salts. On the other hand it is conceivable that a good proportion of the chloride of mercury injected would be rendered inert by combining with the cellular substances of the wood and forming an innocuous, insoluble, and fixed compound of mercury. Yet in the case of arsenical wall-papers we know that the arsenic exists in an insoluble form, in spite of which symptoms of arsenical poisoning are often experienced by individuals sleeping in a room papered with a paper coloured with arsenical pigment. It has been stated by some that the arsenic is converted into a gaseous form by the intervention of a mould and others have been content to conclude that the poisoning arises from the occurrence of a fine arsenical dust in the air of the room. We should hardly expect to find that any transformation of mercury into a permanent gas would be accomplished by moulds, but it is possible that the dust in a room timbered with mercurialised timber would be found to contain mercury. Considering the volatile nature of mercurial compounds we think that on the whole their use for preserving timber destined for building domestic dwellings at any rate is undesirable, especially in view of the fact that other agents much less dangerous than mercuric salts are probably just as effective in arresting or preventing the attacks of "dry rot." Moreover, when timber is properly seasoned there is no necessity for impregnating it with poisonous substances at all as long as it is fixed in buildings which are efficiently ventilated. Dampness is the precursor of "dry rot."

THE DWELLINGS OF THE POOR.

WE have received the report for the year ending June 30th last of the Mansion House Council on the Dwellings of the Poor and congratulate the council upon a record of good work, discreetly conducted. The main business of the council is to promote the formation of local committees throughout the metropolitan area, committees composed of persons interested in the sanitary well-being of the locality and willing to give their services to promote sanitary reform. Caution in the choice of such persons is specially recommended on the very sensible and proper ground that the poor should not be harassed by many different visitors, and it is laid down as imperatively necessary that no distribution of charity should be made in the name of the committees, which are constituted for an entirely different purpose. Their business is to receive complaints of insanitary domestic conditions and to see that these are rectified either by tenants or owners or by appeals to local authorities to enforce the law. It is manifest that the existence of such committees will be likely to have a powerfully stimulating effect upon local administration, even to the extent of assisting to bring about the election of the most suitable candidates for public office, and that it will also render good service in the education of public opinion. For the better attainment of this latter object the committees are provided with leaflets and other means of instruction, and they are directed to keep in touch with School Board visitors and other workers in the respective districts as well as to obtain the aid of local ministers of all denominations in making sanitary work a regular part of the duties of their district visitors. The general report contains summaries of the separate reports of the local committees for Bethnal Green, Hampstead, Kennington, Mile End, North and East St. Pancras, Shoreditch, Whitechapel, St. George's-in-the-East, and Limehouse, and we regret to observe that both in Bethnal Green and in Mile End the aid given by the clergy of specified churches is described as affording a contrast to general clerical indifference. Such indifference seems to us to be not only a

grave dereliction of duty but also an evidence of short-sightedness. The spiritual ministrations of the clergy would be directly and powerfully promoted by every increase of health and of self-respect among their parishioners.

M. MONPROFIT AND THE CONGRÈS DE CHIRURGIE OF FRANCE.

A WAVE of legitimate pride and pleasure has spread over the quaint little old-world city of Angers, in the department of Maine-et-Loire, France, at the announcement that its eminent citizen, M. Ambrose Monprofit, professor of clinical surgery in the Angers School of Medicine, has been elected Vice-President of the Surgical Congress of France for 1905 and President for 1906. The honour has only once or twice in the course of 20 years been bestowed upon a provincial surgeon and never before on the city of Angers. Professor Monprofit, who was born and educated at Angers, is still a comparatively young man for such a distinction, "the youngest surgeon who has been called to the office of president," according to the *Matin*, but he is one of the most celebrated operating surgeons of France, especially in the domain of abdominal surgery. He may almost be said to have introduced the operation of gastro-enterostomy into France and his monograph, which we recently reviewed,[1] forms one of the standard works on the subject. We remember M. Monprofit among the guests who recently visited England and recall his pleasing statement in a speech delivered at one of the luncheons given in the honour of our French guests that he was attached to a hospital, the Hôtel Dieu of Angers, which was founded by an English king, Henry II., Duke of Anjou. We wish to add our warm congratulations to those of his fellow citizens at the well-merited honour which has fallen to his lot.

THE TREATMENT OF HÆMOPHILIA.

WE publish in another column a paper by Dr. Lachlan Grant of Ballachulish in which he records an interesting case of hæmophilia, with some observations on a new method of treatment. The case is that of a boy, aged eight years, a member of a family of known hæmophilic heredity, who suffered from dangerous hæmorrhage after a severe cut on the plantar surface of the right foot produced by stepping on a piece of glass. Treatment by the ordinary methods was tried and failed, for by the third day oozing from the wound was still in progress, extravasation occurred into the surrounding tissues, and the wound itself showed signs of sepsis. Impressed by the rarity of the disease in females the idea occurred to Dr. Grant of trying the internal administration of ovarian extract in the hope that it might be of service, on the principle that the ovaries undoubtedly exert a profound influence on the adult female, possibly through an internal secretion, and that this influence may be the factor concerned in the prevention of the disease in women. Accordingly he gave ovarian extract prepared from the ovaries of sheep in two and a half grain doses three times daily, beginning on the third day, from which time the boy's condition improved and after a somewhat protracted course the wound healed. Dr. Grant's discussion of his case and the part played by the ovarian extract is sound. He does not claim for his observation more than a hope that the extract was of use in the successful termination, but the sequence of improvement after its employment is sufficiently marked to justify him in publishing his case so that further observations may be made by others. The treatment of cases of hæmophilia is of necessity largely an empiric one, since so little is known of the pathogeny of the disease. No constant changes have been observed in the vascular system or in the blood save that the coagulability of the latter is generally admitted to be diminished. Various observations have been made from time to time in cases of this disease of thinness of the walls of the vessels or other histological change, but they have not been confirmed by other observers, and it is of interest to note that in the treatment of the disease the ordinary local methods adopted for the arrest of hæmorrhage seem by themselves often to fail, as in the present case, while arrest follows the internal administration of certain drugs. Arsenic, dilute sulphuric acid in small doses, and calcium chloride have all been credited with beneficial effects in the arrest of the hæmorrhages in hæmophilia, both spontaneous and accidental, and in some cases subcutaneous injections of gelatin have been tried with apparently good results. The calcium chloride treatment is the one which perhaps rests upon the surest basis, since several years ago Dr. A. E. Wright showed that its internal administration produced a diminution of the coagulation time of the blood in cases of hæmophilia to as much as a half, and in this journal so long ago as 1897[1] a note was published drawing attention to this fact and to its application in the treatment of this disease. Dr. Grant's observation is not the first application of opotherapy to the treatment of hæmophilia since suprarenal extract is frequently made use of, and cases have been recorded in which the internal administration of thyroid extract has apparently been directly beneficial. Dr. C. Royds Jones records a case[2] of a young girl with frequently recurring hæmorrhages from the stomach and intestine, together with changes in the joints like those of hæmophilia, which were arrested after the administration of thyroid extract, and quotes an observation of Delace to the same effect. We can congratulate Dr. Grant on the careful way in which he has observed and discussed his case and on his ingenious idea of the use of ovarian extract, and can only re-echo his hope that the treatment may be found to be of service in other cases.

THE NEW YORK UNDERGROUND RAILWAY.

THIS line, which has cost £7,000,000, was opened on Oct. 27th. A good example has been set by its promoters, the New York Subway Company, who generously devoted a sum of £1500, the amount of the first day's receipts on the line, to the New York City Hospital. For four years this gigantic undertaking has employed from 8000 to 10,000 men and it was inevitable that the construction of 23 miles of such a line should entail considerable loss of life and limb to those engaged upon such a difficult and hazardous piece of work. The actual loss proved to be less than 50 lives and the cases of more or less permanent injury are no more than 200. This, considering the circumstances and the numbers employed, is a matter for congratulation, and the generosity of the directors to the New York City Hospital was doubtless in the nature of a thank-offering. The railway commissioner of New York, after inspecting the principal underground railways in Europe and America, determined upon the adoption of the subway system. The difficulties attendant upon the construction of such a line in a city like New York were immense, involving the reconstruction of many miles of sewers, gas, water, and electric mains, and the due maintenance of the adjacent property. To this was added the almost insuperable difficulty attendant upon the dislocation of the street traffic; all, however, have been surmounted. The adoption of such a system for London has been advocated in preference to the tube or tunnel systems and we have ourselves pointed out some of its obvious advantages—namely, its greater accessibility, the

[1] THE LANCET, Oct. 29th, 1904, p. 1221.

[1] THE LANCET, Oct. 23rd, 1897, p. 1061.
[2] Brit. Med. Jour., Nov. 10th, 1900, p. 1375.

facilities offered for escape in case of accident, the better ventilation of the line, and the saving of expense and discomfort caused by the perpetual opening of the roadways for repairs to pipes and wires, which would all be accessible from the subway. London, however, is now committed to the tube system and experience in its working has resulted in many improvements.

GASTRIC ULCER IN CHILDREN.

GASTRIC ulcer is very rare in children. In an exhaustive paper on the subject, published in the *Boston Medical and Surgical Journal* of Oct. 6th and 13th, Dr. E. G. Cutler states that after a careful search in the literature he has been able to find only 26 cases recorded, in 24 of which a necropsy was made. To these he adds three cases from the records of the Massachusetts General Hospital. In the first case a boy, aged 12 years, was admitted on June 25th, 1889. His mother stated that he was ill in the previous summer with inflammation of the bowels and since then had been rather pale and not so strong as before. At times his face and pillow were stained with blood in the morning. A fortnight before admission he had a sharp attack of epigastric pain which lasted two days. About two hours after the onset of the pain he vomited a cupful of blood. Since then he occasionally complained of pain but not particularly after eating. Physical examination was negative. Under treatment recovery followed. In the second case a child, aged eight years (sex not stated), was admitted on August 12th, 1901, with a history of vomiting of food and bright red blood a week before, pain after meals, constipation, and headache. The face and mucous membranes were pale and there was tenderness below the xiphoid cartilage. Milk diet was prescribed and recovery followed. In the third case a girl, aged six years, was admitted on Feb. 7th, 1903. For a week she had been restless and three days before admission there was pain in the right side of the abdomen. On the day of admission she bled from the nose and mouth. About a quart of blood was said to have come away in clots. At the time she did not cough or appear to vomit. A loud mitral systolic murmur was heard over the præcordia. There was no abdominal tenderness. The temperature was 102° F. and the hæmoglobin in the blood amounted to 85 per cent. On the 10th an enema was followed by a motion containing much dark blood. Under treatment recovery took place. Analysis of the 29 cases yielded the following facts. There was a remarkable preponderance of the female sex; 18 of the cases occurred in females, five in males, and in the remaining six the sex was not stated. Six of the cases occurred soon after birth; the youngest patient was 35 hours old and the others were two, five, seven, 11, and 15 days old respectively. In eight cases the age was less than seven years and in nine cases it was between eight and 13 years. The symptoms varied with the age. In infants the first symptoms observed were restlessness and hæmatemesis or melæna; there was evidence of pain in one case. In older children dyspepsia or abdominal pain usually preceded the more characteristic symptoms. Epigastric pain after meals was described in five cases and in one it was severe. The pain usually was located in one spot in the epigastrium; occasionally it was in the back, sometimes it was referred to the abdomen as a whole. A tender spot was frequently found below the xiphoid cartilage. Vomiting occurred in 16 cases and hæmatemesis in 11. In the chronic cases the ulceration had an inhibitory effect on the growth and nutrition. Perforation occurred in several cases. The following case, recorded by Dr. J. F. Goodhart in vol. xxxii. of the Transactions of the Pathological Society of London, is an example of gastric ulcer in a newly born infant. Mr. Cock, resident obstetric assistant at Guy's Hospital, was called to a newly born infant who was vomiting blood, from which it died 30 hours after birth. It was apparently well formed and healthy, though congenital syphilis was possible. The stomach was found distended with clot and a small ulcer was seen at the cardiac end near the greater curvature. The edge of the ulcer was sharp, raised, firm, pink, and vascular. In the bottom of the ulcer was a dark speck which under a lens proved to be an opening in an artery running along the greater curvature. The remainder of the stomach was healthy.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL.

THE wild statements which were recently made in a portion of the daily press regarding the rebuilding of St. Bartholomew's Hospital have moved Sir Trevor Lawrence, the treasurer of the hospital, to a reply. If any answer were necessary, and we doubt whether there was any need for one, Sir Trevor Lawrence's statements must be considered as amply sufficient. The condition of the works at present is as follows. The old buildings of Christ's Hospital have been pulled down and excavations for the foundation of the new buildings are being made. The detailed plans of the special departments are completed and it is hoped that the first portion of the new buildings will be finished by the summer of 1906. The total cost of this portion of the works will be about £110,000 and towards this sum there are £84,000 in hand. The governors, whom Sir Trevor Lawrence modestly says are in no ways discouraged, are in fact extremely satisfied with the response which the public has made to their appeal, and money continues to come in.

GONORRHŒAL SALPINGITIS IN A CHILD.

IN the *British Journal of Children's Diseases* for October Mr. Leonard A. Bidwell has recorded a case of gonorrhœal salpingitis at a remarkably early age. On June 20th, 1902, he saw a girl, aged six years, suffering from inflammation of the vulva. She had come from South Africa and her parents had some suspicion that she had been assaulted by a Kaffir. But against this was the fact that the discharge was not observed until a month after leaving home. There was superficial ulceration inside the vulva extending toward the urethral orifice. Simple ulceration was diagnosed and an astringent was prescribed. On the 25th there was painful swelling of the right foot. Examination showed redness and œdema over the flexor tendon sheath. The temperature was 102° F. and the discharge was about the same. On the following day, as the temperature was still high, the foot more swollen, and the pain more acute, an incision was made and a clear fluid was let out of the tendon sheath. Further examination revealed pus issuing from the os uteri. On the 28th the discharge was less but the child complained of abdominal pain. On the 29th the temperature rose to 103° and the abdominal pain was severe. There were rigidity of the right rectus and swelling to the right of the middle line in the hypogastrium, which was very tender but not dull on percussion, and retention of urine. On the 30th the temperature fell to 100°, the discharge was diminished, and the abdominal swelling was less. Nothing was felt per rectum. A consultation was held with Mr. W. Watson Cheyne who diagnosed subsiding gonorrhœal salpingitis. Examination of the discharge showed gonococci in large numbers. The child seemed to improve for three days but on July 4th the temperature rose to 101° F. On the following day it was 102° and she was in great pain. On rectal examination a very tender swelling was felt on the left side of the pelvis. On the 8th the pain was more severe, the abdomen was slightly distended, and the swelling was distinct. The abdomen was opened above the pubes. There were

slightly purulent fluid in the peritoneal cavity and flakes of lymph on the intestines. A dense mass was felt on either side of the pelvis and on separating adhesions pus escaped. Both tubes were full of pus and were removed. The pelvis was sponged out and a drainage-tube was inserted. On the 30th the wound was quite healed and the patient went home. The discharge, however, had not ceased and still contained gonococci. On Sept. 17th, as the discharge was still coming from the uterus, the organ was curetted under chloroform after dilatation of the os. The discharge ceased within a week. Some months later the child was in perfect health. Salpingectomy was performed in consequence of the grave condition of the child. The ovaries were left in the hope of avoiding any arrest of development. It is interesting that the discharge did not cease after the salpingectomy. Mr. Bidwell thinks that the lesson of the case is that when there is gonorrhœal discharge from the vagina the patient should be anæsthetised and if the discharge is found to come from the os it should be dilated and the uterus curetted.

HOSPITAL ABUSE.

IN our issue of Sept. 24th we commented upon a resolution which was passed at the annual meeting of the governors of the Dorset County Hospital and which ran as follows:—

> The committee shall have power to admit patients requiring surgical treatment who are able to pay the whole or part of the cost of such treatment, such cases to be admitted only on the recommendation of a medical practitioner and when there is ample accommodation and when, in the opinion of the committee, they require assistance.

Such cases were to be admitted under the care of one of the honorary medical staff and we stated that such a rule would seem to safeguard any attempt to abuse the charity and to supply aid to a class of patient who is really in need of it. Unfortunately, however, the trust deed of the charity stands in the way of this innovation, for we are now informed by Dr. W. G. V. Lush, a physician to the hospital:—

> 1. That the question has arisen whether the reception of paying patients is not contrary to the trust deed of the charity.
> 2. That the class of persons it is desired to benefit have always been admitted to the hospital without payment.
> 3. That the committee of management have decided that they shall for the present be admitted without payment.

So for the present matters must remain as they are.

THE PRESIDENTIAL ADDRESS AT THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE important subject of paranoia, a form of insanity interesting alike in its psychological and its medico-legal aspects, a disease which has counted among its victims King Ludwig II. of Bavaria and the philosopher Rousseau, was dealt with in the presidential address delivered by Dr. R. Percy Smith at the recent annual meeting of the Medico-Psychological Association in London and published in the *Journal of Mental Science* for October. The certificate referring to King Ludwig (1886), signed by four physicians, has for its first paragraph the following: "His Majesty is in a far advanced stage of insanity, suffering from that form of mental disease which is well known to alienist physicians of experience as paranoia." In this country, however, says Dr. Smith, the term "paranoia" was at first received with little favour, the title of this disease not being found in English text-books of the date 1886. Dr. Smith believes that the term has been much confused and obscured by the custom of writers, especially on the continent, who use the term "acute paranoia" for a whole class of various acute psychoses which have no connexion with paranoia proper. As now understood, he regarded it as an insanity of chronic delusional form in which the delusions gradually underwent organisation and built themselves up into a seemingly coherent "system." The delusions were of a persecutory or of an exalted nature, or were partly one and partly the other. In all cases the importance of the affective element of mind, the organic feeling of well-being or malaise, of exaltation or of depression, had to be considered, for one of these states of mind was the first to suffer. Paranoia was probably not a primary disorder of the intellectual functions but of the affective side of mind, that which constituted mood and feeling and which was gradually and seriously deranged before the first symptoms of intellectual derangement appeared. It was a slowly progressive and chronic disease. Allowing that acute disturbances occurred, with remissions in some cases, these were, said Dr. Smith, "merely the initial phase of chronic delusional insanity with a remission of symptoms." After discussing briefly the view of the late Professor von Krafft-Ebing, who held that affective disorder of the mind was absent in the early stage of the disease and who limited the morbid mental process to the sphere of ideation (*vorstellungsphäre*), Dr. Smith deals with the teachings of Professor Kraepelin of Heidelberg. The latter regards paranoia as a chronic disease, uses for its German equivalent the term *verrücktheit*, and entirely separates acute hallucinatory, delusional, and delirious forms of insanity from paranoia. He further holds the idea of an "acute paranoia" to be a contradiction in terms, because the persistent growth of developing delusions are entirely overlooked. He therefore limits the term to the undoubted group of cases in which there is a clearly recognised, slowly developing, and unshakable system of delusions. It is the question of whether the disease is primarily an intellectual or primarily an affective disorder of the mind that has acted as an incubus on the minds of investigators, says Dr. Smith. If it be accepted that neither mode of origin is exclusive the unity of the disease will be more readily recognised.

THE HOSPITAL TREATMENT OF SCARLET FEVER AND DIPHTHERIA.

AT a meeting of the Royal Sanitary Institute held at Southampton on Oct. 29th a discussion on Infectious Fever Hospitals was opened by Mr. R. E. Lauder, medical officer of health of Southampton. He prefaced his remarks with the statement that he did not propose to discuss whether the results obtained in isolation hospitals justified their cost or whether they limited or checked the spread of disease to a degree equal to that which has been or could be expected. He wished to direct attention to a different question—namely, was the position of hospitals for infectious fevers what it ought to be in the interests of the patient as well as of the community? He said that the primary object of these hospitals was to receive patients who were a source of danger to the public and he strongly condemned the practice of using the same ward for acute cases and convalescents soon to be discharged. In scarlet fever, diphtheria, and measles infectious discharges were given off from the respiratory passages which, owing to their pathological state, might be compared to an open wound, and were capable of receiving, incubating, and diffusing pathogenic organisms. When such patients were associated in wards they were liable to have their condition aggravated by the action of the unwholesome atmosphere to which each contributed his quota of specific infection. In the interest of the patient himself he should be kept isolated from the other patients and in the interest of the community to which he would return it was essential that he should be discharged from the purest atmosphere possible. Mr. Lauder therefore proposed the following conditions in treatment and administration: 1. The patient ought to be admitted through a receiving room where he would be purified as much as possible by change of clothes, bathing, and douching of the nose, throat, and ears if practicable, such room to be disinfected thoroughly each time it has been

used. 2. He ought to be removed from the receiving room to a specially prepared room apart from other patients where he would be treated until convalescent and free from discharges or other complications—each patient being allotted a separate room. 3. He ought then to be disinfected as much as possible by bathing, douching of the nose, throat, and ears, and change of clothes, and placed in a disinfected room by himself, if possible in a pavilion set apart for convalescent patients, for at least a week before discharge from hospital.

THE METROPOLITAN ASYLUMS BOARD AND ITS MEDICAL OFFICERS.

AN ordinary meeting of the managers of the Metropolitan Asylums Board was held on Saturday last at the office of the Board, when a motion to rescind the resolution of the Board sanctioning small-pox investigation at Joyce Green Hospital was lost by 10 votes to 34. Mr. W. L. Beure urged the Board to pause before allowing a great moral wrong to be committed in its name, but the Board very wisely refused to take the hysterical view that wanton cruelty was being committed by certain medical officers. We wish that the Board would take a similar line in the matter of other insinuations against its employés. The *Daily Mirror* and *Lloyd's Weekly News* both report Mr. J. T. Helby as saying that he was afraid that the brandy supplied to the Board's institutions for medicinal purposes was often otherwise used. If Mr. Helby knows of anyone who is stealing brandy it is his duty to name him; if he suspects anyone of drunken peculation it is his duty to take steps to verify his suspicion. But if he only says this sort of thing out of the fulness of his distrust of the medical superintendents who have control of the hospitals of the Board it is time that the Local Government Board ceased to nominate him as a manager. We can fully enter into the feelings of any medical man who declines to work in a service where he can be subjected to such insinuations.

THE PHYSICAL CONDITION OF BOARD SCHOOL CHILDREN.

To say that mental training rests upon a foundation of bodily well-being is to state a truism. School boards all through the country are aware of this fact and that of London with its immense poor population has been obliged to devote to it particular consideration. Three successive committees have been appointed to inquire into the subject and as a result we are informed that while 80 per cent. of the pupils in the metropolitan board schools belong to the thriving working class the remaining 20 per cent. are in a state of destitution. The latest of these committees in 1898 proposed that the feeding of such hapless children should be gratuitously provided for, but the school board of that date could not see a way to take this step. Dr. Macnamara, M.P., read a paper at a recent meeting of the Childhood Society in which he recommended the adoption of a system resembling that of the *cantine scolaire* which has worked satisfactorily in Paris. A report of this meeting is published in another column. Dr. Macnamara starts on the principle that no child should remain unfed and he proposes (1) that all parents who can must make suitable provision for the feeding of their children, or in default be liable to severe penalties; and (2) that children of parents who are unable through misfortune to make such provision shall be assisted at the public expense. With this object elementary schools in the poorer urban districts would be grouped together and each group would be provided with a dining-hall, admission to which would be by coupon. Books of coupons would be sold to parents of the first-mentioned class and teachers would be supplied with similar books for the benefit of the genuinely indigent. Working expenses would be met by voluntary subscriptions, by the sale of coupons, by grants in aid from the Exchequer, and by a small addition (½*d.* in the £, it is said, would suffice in London) to the local rates. A further arrangement is suggested to provide for the medical examination of every child on admission to schools in these poor areas and for subsequent medical supervision. It is not stated how expenses under this head are to be met—possibly some plan on the club model might be adopted. It cannot be doubted that there is justification for some reform in the direction of Dr. Macnamara's proposals and that these, if they can be carried out as intended, should go far to settle the feeding difficulty. There seems to be no reason why they should not be found to answer if it is clearly understood, and insisted on from the outset, that their object is essentially charitable. Abuse must be guarded against. A prime requisite to success would be efficient inspection but the official machinery now available in schools should suffice for this purpose. The proposal that physical supervision should accompany tuition in the case of poor children is not superfluous. It would act as a wholesome check upon the disposition too prevalent in our school system to push a child on in his work without due regard to his physical capability.

PLAN FOR A PSYCHOPATHIC HOSPITAL.

PSYCHOPATHIC hospitals, as distinguished from public asylums for the custody of the insane, are the product of the later decades of the nineteenth century. The famous alienist Griesinger was the first to frame a plan for the establishment of psychopathic hospitals in Germany in the middle of the last century. In the *American Journal of Insanity* for July a valuable paper is contributed by Dr. L. Pierce Clark of New York, neurologist to the Randall's Island Hospital and schools, and Mr. H. P. Montgomery, architect, New York city, containing plans and suggestions for the building of psychopathic wards, pavilions, and hospitals, based upon their experiences and study of similar institutions now in existence in Europe and America. The first psychopathic clinic in Germany was built at Heidelberg on the "block system" under one roof. The workings of this clinic in modern psychiatry under Kraepelin are perhaps the most familiar to us. Three types of building are described with illustrative plans by Dr. Clark and Mr. Montgomery. First, psychopathic wards in, or attached to, general hospitals and administered by their staff. These are intended for small towns of from 10,000 to 20,000 inhabitants. The plan consists of a hospital wing of two storeys with wards for each sex. Special arrangements are made for baths and hydrotherapy. The second plan is for a psychopathic pavilion adjacent to, but disconnected from, the general hospital in towns of from 20,000 to 50,000 inhabitants. In addition to the special features of the wards in system No. 1 it has resident alienists and trained nurses—a special staff of its own—and contains an out-patient department or clinic which furnishes facilities for the selection of cases and should aid in reducing the fear with which the public regard such patients. The pavilion is intended to receive for treatment cases of insanity for a longer period than the hospital ward. "Under ordinary circumstances," say Dr. Clark and Mr. Montgomery, "the acutely insane may be kept in the ward or pavilion at least six weeks; the average longest time should not be more than four months." In German institutions of the pavilion type possessing a resident physician, plenty of reception room, and open wards, such as at Dresden, Königsberg, and Breslau, the ratio of cases received is about 1 to 500 of the total population. The third and most desirable provision, the one suited for great cities with large populations, is the psychopathic hospital as an independent and complete institution. Other things being equal, it is built upon the

villa plan of detached blocks or cottages which may cover approximately five or six acres of land. The houses are of the country type, built of brick, plastered outside and ornamented with red brick. The capacity of the hospital should be from 140 to 150 beds; it should not exceed 200 beds. The wings would be three or four storeys high, accommodating 25 patients on each ward floor, arranged in the following order: First floor, reception wards and out-patient clinic (for males and females); second floor, isolation wards; third floor, convalescent wards; and fourth floor, nurses' quarters and roof gardens. The psychopathic hospital should not be more difficult of access than a general hospital. A resident medical superintendent and six assistant medical officers, and 50 nurses, two-thirds of whom would be women, would constitute the medical staff. Dr. Clark and Mr. Montgomery give plans and detailed estimates showing that the cost of such a building with equipments, including offices, kitchens, two convalescent cottages, two isolation cottages, morgue, and reception wards, need not exceed $1120 per patient, or about £225 per head, the capacity of accommodation being 150 beds.

THE DANGERS OF CELLULOID.

ALL celluloid articles, it seems to us, should be marked with the words "highly inflammable" or a caution should be printed upon them that they must not be heated or placed near a flame or fire. There are still many persons who are ignorant of the dangerous nature of this useful substitute for ivory which is being employed very extensively for making a great number and variety of domestic articles. Attention is called in a letter in the *Times* of Nov. 2nd to the danger arising from the use of slabs of celluloid in the process of glazing photographic prints. The prints are pressed upon a specially prepared sheet, formerly made of metal, and to facilitate the drying process the sheet is placed near the fire. Now that celluloid has been substituted for the metal sheet the danger of placing it near the fire is obvious. In the letter alluded to the writer says that he found his wife bending over the fender with a batch of photographs on such a patent glazer which she imagined to be talc. The suspicion that the material was celluloid proved to be right, for on communicating with the manufacturers the reply was that "the glaze is made of celluloid and would be dangerous near the fire." Thus, not until inquiry was made was a word of warning or caution issued as to the dangerous nature of the "patent glazer." In the meantime a serious accident might easily have happened. Surely something should be done to compel the issuing of a warning as to the highly inflammable nature of all articles made of this nitro-compound. We have called attention in our columns again and again to the great importance of such a step being enforced.

THE EAST LONDON MEDICAL SOCIETY AND THE LONDON HOSPITAL.

WE publish to-day a letter from the honorary secretary of the East London Medical Society in further explanation of the position taken up by the society in relation to the indiscriminate character of the relief said to be afforded at the London Hospital and, with every desire to avoid any hindrance to the work of a great charity, we cannot but feel that the society has much right on its side and that its contentions are likely to command the general sympathy of the medical profession. It says, in effect, that the hospital authorities have no right to receive, either as in- or out-patients, persons who can afford to pay moderate and reasonable outside charges for the treatment which their cases require; that to do so is a misapplication of funds contributed for the benefit of the poor; and that the responsibility of avoiding such misapplication rests upon the hospital and upon the hospital alone. The society also contends that the existing practice of allowing out-patients to pay a portion of the cost of the medicine or dressings supplied to them is highly objectionable and that it leads those who make such payments to regard themselves no longer as persons receiving charity but rather as independent supporters of the institution. With this view of the case we are in entire agreement, for we feel sure that patients of the class concerned cannot, or perhaps will not, recognise the view of the nature of their contributions which the authorities desire to assert; they will maintain, and sometimes even believe, that they have received only what they have paid for. We also join with the society in the strongest possible condemnation of the suggestion that local medical practitioners should visit the out-patient rooms for the purpose of pointing out applicants able to pay, or, in other words, for the purpose of acting as detectives to assist the hospital authorities in the discharge of their own duties. Differences of opinion may, and must, arise concerning the degree of poverty which would justify hospital treatment and there will always be a certain proportion of cases in which the cost of some special treatment required would be beyond the means of a patient able to pay under ordinary conditions. The moderation of the views put forward by the society justifies the opinion that it would not have protested against any use of the hospital which could be justified on either of the foregoing grounds and entitles its complaint to careful and respectful consideration. We commend the whole subject to the attention of the authorities of the various hospital funds in the hope that some general principles for dealing with a very important question may be urged upon the committees of all hospitals alike, and that the medical profession may be relieved of a form of competition which presses hardly upon them.

THE WEST RIDING COUNTY COUNCIL BACTERIOLOGICAL LABORATORY.

THE third annual report from the bacteriological laboratory established by the West Riding county council shows that the assistance it affords to the medical officers of health and practitioners in the district is much appreciated. Since its establishment there has been a steady increase in the number of specimens sent for examination and this increase has been spread over all the varieties of investigation undertaken by the laboratory. The total number of examinations in 1903 was 2803, as contrasted with 2236 in 1902. In his last report, and again in this, the director, Dr. P. J. Cammidge, thanks the medical men making use of the laboratory for the clinical details they have supplied, but he finds occasion to complain that in some cases little or no information is given for fear, apparently, lest the judgment of the pathologist should be biased. It is a complaint that must find an echo in the minds of all directors of clinical laboratories. Practitioners do not realise that the report of a pathologist is a reasoned deduction from what is observed under the microscope or in the test tube interpreted in the light of such clinical facts as are available and is not a more or less happy guess at the answer to a pathological conundrum. In 1903 the ratio of the number of examinations of the sera of enteric fever cases to the total number of those notified in the district was not quite so high as in the previous year. In nearly 37 per cent. of the cases examined the urine of enteric fever patients was found to contain typhoid bacilli, thus showing the dangerous character of this excretion. We had occasion to note last year,[1] in dealing with the annual report of the same laboratory, the very high percentage of cases of diphtheria successfully diagnosed without culture by the use of Neisser's staining method and this year the results are equally extraordinary. About 50 per cent. were thus diagnosed. The

[1] THE LANCET, Nov. 7th, 1903, p. 1314.

director would like to see the laboratory more utilised for the early diagnosis of tuberculosis and for the determination of the cessation of the infective period in diphtheria. It is evident that the laboratory is doing good work in its district and we trust it will continue on the lines laid down by its first director.

THE LONDON COUNTY COUNCIL AND VISION.

OUR attention has been called to a printed notice issued by the London County Council in its new capacity as the educational authority for the metropolis and with the subheading "School Board for London," in which, "your" vision being defective, "you" are desired to have "your" eyes examined and to obtain the advice of a properly qualified medical man. "You" are especially warned against all advertising sight-testing establishments and against accepting the advice of any opticians, as the certificates or recommendations of such will not be accepted by the Board. The information is also given that the medical officer has made special arrangements with certain medical men, whose names and addresses are appended, "who act as oculists for the Board, will see any candidate, whose vision has been found defective, at a considerably reduced and inclusive fee for the examination of the eyes and prescription for any glasses which may be required." The last sentences appear to indicate that the notice, which at first sight appears to be addressed *urbi et orbi*, is only intended for the guidance of persons seeking office as clerks or teachers under the Board; and, if so, we must congratulate that body upon the soundness of the advice which it has given. We question, however, whether the publication of the names mentioned is either quite in good taste or likely to be approved by the gentlemen concerned, and we are puzzled by the further information that "for necessitous cases, who are too poor to pay anything for medical advice, the ophthalmic surgeons may be consulted in the out-patient rooms of various special and general hospitals." Surely no candidate for educational office can be so poor as to be unable to pay the reduced fee which the Board has induced its own officers to accept and everything like an official recognition of the right of the general public to resort to hospitals should, we think, be very carefully avoided.

THE dinner of the past and present students and friends of the Royal Dental Hospital of London will be held at the Hotel Métropole (Whitehall Salon) on Saturday, Nov. 26th, at 6.30 P.M. Mr. Morton A. Smale will preside. Gentlemen either now or formerly connected with the hospital or medical school who may through inadvertence not have received special notice, and who desire to be present, are requested to communicate with the Dean at the Royal Dental Hospital, 32, Leicester-square, London.

THE November dinner of the Aberdeen University Club, London, will be held at the Trocadéro Restaurant, Shaftesbury-avenue, W., on Wednesday, Nov. 16th, at 7 P.M., Sir William Niven, K.C.B., LL.D., being in the chair. Members desiring to be present should communicate with the honorary secretaries, Dr. R. J. Collie, 25, Porchester-terrace, London, W., and Mr. J. M. Bulloch.

A MEETING will be held to-day (Friday, Nov. 4th) at the Westminster Palace Hotel to consider the need for speedily organising an adequate supply of trained midwives to meet the requirements of the Midwives Act. The Archbishop of Canterbury will take the chair, and Dr. F. H. Champneys, Mrs. Humphry Ward, and Lord Brassey will be among the speakers.

THE NEW SLAUGHTER-HOUSE AT CHATHAM.

ON Tuesday last Mr. Arthur H. Lee, M.P., Civil Lord of the Admiralty, invited a number of friends interested in the subject of public slaughter-houses to visit the slaughter-house which has just been provided by the Admiralty in the Chatham victualling yard. It will be recollected that Mr. Lee recently presided over a departmental committee appointed by the Admiralty to determine the most humane method of killing animals for human food and the slaughter-house at Chatham was in great part designed to meet the views expressed by this committee in its report. We say "in great part" because the building had already been partially erected before Mr. Lee was able to give effect to his views and hence his work was partially one of adaptation.

The slaughter-house, which is in close proximity to a railway siding, consists of a large, lofty, oblong hall. Abutting on one end of the hall are the pens in which the animals are placed previously to slaughter. From the pens the animals pass through a short open passage to the door of the slaughter-house. This passage is large enough to contain one bullock. The animal on entering it is immediately separated from his fellows by the closing of a gate and it then faces the door of the slaughter-house which is at once opened to receive it. It next passes into a compartment, of which there are four at the end of the hall and which are separated from each other by walls five feet in height, sufficiently high, in fact, to prevent any animal in one compartment from seeing what is taking place in the others. These slaughtering compartments, each of which is sufficiently large for the slaughtering of a single bullock, form the first division of the hall. Here the animal is felled and bled. A door at the end of the compartment is then opened, and the carcass is drawn into the next division of the hall where it is dressed. It is subsequently conveyed on overhead rails into a third division in which it hangs until it is cool. Directly the animal is removed from the slaughtering compartment the floor is flushed by a hose and all trace of the work is removed. The compartment is then ready to receive from the pen another bullock. In this way, inasmuch as there are four slaughtering compartments, four bullocks can be readily killed and dressed in a quarter of an hour.

The intention of the design is to prevent any animal entering the slaughter-house from being exposed to the smell of the blood and the sight of the killing of other animals and in this respect it undoubtedly attains its object. In every other way arrangements are made to prevent so far as possible any suffering by the animal. The floor is constructed of a specially made brick sufficiently rough to prevent the animal from slipping and hence cattle are easily led to the required spot without the struggle which so frequently takes place in slaughter-houses the floors of which are covered with smooth cement. So far as could be seen, this roughening of the surface did not militate against the maintenance of the scrupulous cleanliness necessary in a slaughter-house. The building is amply lighted from the roof and sides and lined with white glazed bricks which all contribute to the same end.

Several bullocks and a few sheep were killed on Tuesday by the methods recommended by Mr. Lee's committee and no difficulty whatever was experienced in bringing the animals into the slaughter-house or in carrying out the work in the way which was intended. How far animals are frightened by, or appreciate, the sight and smell of blood on entering a slaughter-house cannot be determined but there is no question that the Chatham dockyard slaughter-house adequately conceals from them these conditions without in the least obstructing the necessary work of killing and of dressing the carcasses. In connexion with the slaughter-house are a separate building for dealing with offal, a dining room for the men employed in the work of the slaughter-house, with water-closets and other conveniences. Public authorities intending to erect a slaughter-house would do well to see that at Chatham before deciding on any plans.

INSTITUTION FOR SANE EPILEPTICS.

ON Oct. 25th a ceremony took place at Langho, a few miles from Blackburn, which was interesting in itself and important also as showing a distinct advance in the care and treatment of sane epileptics. The case of these unfortunate people when panpers was pitiable. Hitherto they have had to live a life of degrading charity, or otherwise be impounded in the wards of the weak-minded at asylum or workhouse. Their condition has for a considerable time engaged the attention of the Chorlton board of guardians and latterly of the Manchester board likewise. It will scarcely be wrong to attribute the initiative of the steps that have since been taken to the earnest and wise philanthropy of Dr. J. M. Rhodes. These poor epileptics were indeed the victims of a sorrowful fate. Their infirmity rendered them unsafe as workers in factory or warehouse and they gravitated to the workhouse where, according to the classification in use, they were "lunatic or nothing." But now the joint committee of the Manchester and the Chorlton boards of guardians has made some provision for these patients which it is hoped will be the precursor of a widespread endeavour to benefit their lot.

On the day mentioned Dr. Rhodes, who is chairman of the committee, laid the foundation-stone of the buildings of the colony for sane epileptics at Langho. It is the first public institution of the kind in this country and the scheme seems to have been carefully thought out. The estate covers an area of 166 acres in the valley of the Ribble, with Pendle Hill on the north and a fine view across the valley, Stoneyhurst College being a marked feature in the distant landscape. In contrast with some other parts of Lancashire, where the people are crowded in dingy towns from the slums of which many of the epileptics come these homes are situated in a fair and spacious country. The entrance is on the main road from Clitheroe to Preston. After passing the lodge the house of the medical superintendent is seen on the left. Farther up the drive, but a little away in a screened position on the right, is the mortuary. A little farther on is the receiving and hospital block where newcomers will go through a period of probation. Passing on again to the left is a spacious assembly hall, part of which may be used for class-rooms and part for a chapel. The administrative block, in a central position, is a roomy three-storey building where the principal offices will be placed, and in which there will be dining and sitting rooms for the attendants and nurses on the ground floor. The upper part will provide residential quarters for the officers, nurses, and attendants, and the plan easily admits of extension. Behind the main building are storerooms and kitchens, and farther back still are the beginnings of three other buildings. One is to contain workshops for brush-makers, upholsterers, carpenters, tailors, shoemakers, and plumbers. Another is the engine-house for the electric light and for the laundry and kitchens as well as for providing steam for the heating of the central buildings. The third building forms the general laundry block. At some distance to the right and left of the administrative block six houses are to be provided, three for each sex, and each one is to accommodate 40 inmates, so that there will at first be 240 patients in the houses. The provision for administration, however, is adequate for four times that number. The capital expenditure is £78,500 and in addition to this there is the value of the land which has not cost an exorbitant price. The water-supply is from the Blackburn main, which passes through the estate.

The ceremony of laying the foundation-stone was in part formal. It was attended by Mr. H. Jenner-Fust, Local Government Board inspector, by Mr. J. Royle, deputy lord mayor of Manchester, who has taken much interest in this scheme and also in the institution for the feeble-minded at Sandlebridge, and by Mr. Alderman McDougall. In his address Dr. Rhodes said that the object they had in view was the welfare of poor people who suffered from epilepsy. He mentioned the popular northern saying, "What Lancashire thinks to-day England will think to-morrow," and hoped, from letters which he had received from Southampton, Bristol, the Midlands, and the North, that the saying would be verified. "We have heard much," he said, "about the increase of nervous diseases, and this was so until 1885, since which time we have been progressing with the increased sanitation of the homes of the people. Between 1831-85, 1800 per million died from nervous diseases, while in the last quinquennial period the proportion had been 1400 per million. In this scheme it was attempted to substitute for the workhouse wards places where the epileptics would be employed, and they hoped benefited."

LORD KELVIN ON MEDICAL STUDIES.

LORD KELVIN presided on Oct. 28th at the distribution of prizes to the successful students at St. George's Hospital Medical School. In the course of an address which he delivered to the students he reminded them that though their medical education fitted them to earn their livelihood in an honourable position they must always bear in mind that the modern medical man must be a scientific man, and, more than that, he must be a philosopher. The long and difficult course of subjects for a medical student comprised mechanics, dynamics, physics, chemistry, electricity, medicine, surgery, bacteriology, anatomy, physiology, and physiological chemistry. He pointed out how medicine was a strictly scientific profession and how all the subjects which he had enumerated were important. The fundamental studies of medicine were of a strictly materialistic kind, chemistry and physics, for instance, belonging to a different world from that which constituted their main subject of study, the world of life. He would add human nature to the list of subjects which he had given and, although lectures were not delivered on it, still, whether they liked it or not, they had to study human nature, they had to deal with it, and it carried them far beyond dead matter. They must not imagine that any hocus-pocus with electricity or with viscous fluids could make a living cell. Splendid work had recently been carried out in the investigation of what used to be called organic chemistry, in which a great French chemist had taken the lead, and it was interesting to know that materials belonging to the general class of food-stuffs, such as sugar and alcohol, which might also be called a food, could be made out of chemical elements. Students, however, must not allow themselves to be dazzled by the imaginings of the newspapers into believing that because chemists had made food-stuffs there was any prospect of any process being found in any laboratory for making a living thing, whether the minutest germ of bacteriology or anything smaller or greater. Between crystals and cells there was an absolute difference; anything that crystallised could be made by the chemist; but nothing approaching to the cell of a living creature had ever yet been made. The deduction drawn from an enormous amount of very intricate and thorough-going investigations by Huxley and others was that by no artificial process could living matter be made out of dead. The study of medicine went vastly beyond the subject of chemistry, beyond his own well-loved subject of physics and of electricity, infinitely beyond them in depth of scientific and human interest. As students of medicine they would have to study daily the phenomena of life, the phenomena of death, and the differences between life and death. They must never regard the living men, women, and children they would have to treat as mere physical mechanisms or as mere laboratory specimens, but they must think of them as human beings and he was convinced that it would be only natural for them to act in that manner. Every student in that hospital, every nurse, every practitioner had to administer spiritual consolation to the patients. They must not, however, imagine that he wished them to encroach on theological matters. What he said was that whenever they kept up a patient's spirits they were administering to him spiritual consolation. Let their natural feeling prompt them when dealing with their patients and then they could not go wrong and they would be spiritual helps to their patients as well as physicians and surgeons. They must recognise that as men could not live on bread alone so also patients could not get cured by splints and drugs alone. Lord Kelvin concluded by assuring them how glad he was to know that they were going out into the world as benefactors of the human race. After Lord Kelvin was accorded a hearty vote of thanks a visit was paid to the wards of the hospital. Among the prize winners were Mr. W. Bvam who gained the Brackenbury prize in medicine, the Brackenbury prize in surgery, and the Thompson medal, and Mr. J. S. C. Douglas who was awarded the Webb prize in bacteriology.

Looking Back.

FROM

THE LANCET, *SATURDAY*, NOV. 4, 1826.

CHEMISTRY.

A new substance has been discovered by M. Balard, a young chemist of Montpellier, which he at first called *muride*, but which, at the suggestion of Thenard, Vauquelin, and Gay-Lussac, he afterwards changed to BROME, from the Greek word βρωμος, signifying a bad smell. This substance has been obtained from sea-water by M. Balard, and was discovered by him during the manufacture of iodine.

Its principal characters are thus briefly described; it is liquid at the ordinary temperature of the atmosphere, and even at 18° below the zero of Reaumur. In mass, its colour is of a deep reddish brown; when broken, it appears just the colour of the red hyacinth. Its smell is very strong, and much resembles that of chlorine. Its density is about 3. It destroys colours in the same manner as chlorine, and dissolves in water, alcohol and æther. M. Balard has combined it with a great number of simple bodies, and has obtained some very remarkable compounds. It is not so strong as chlorine, but is stronger than iodine, which is very singular, and renders it probable that it may ultimately prove to be only a compound of these two bodies. It appears to resemble chlorine rather more than the other. With hydrogen, it forms an *hydracide*, or hydrobromic acid; and with oxygen, it forms bromic acid, which, in its various combinations, has a great resemblance to the chlorates. With heat it decomposes, like chlorine, all the soluble alkaline oxides, and disengages the oxygen from them; with cold, it combines with the oxides, and forms *bromides*, easily decomposable by heat, and by the weakest acids. The weight of its atom is 9.328, taking oxygen as unity. The Academy of Sciences considers this discovery of M. Balard as a very important acquisition to chemistry.

A detailed account of the *brôme* and its combinations has been published in the *Annales de Chimie et de Physique* for August last.

UNDERFED CHILDREN.

DR. T. J. MACNAMARA, M.P., in the course of a discussion on the Physical Condition of Working-class Children at the Royal Sanitary Institute, London, on Oct. 27th, set forth in detail some practical proposals for dealing with the question of the definite provision by various local authorities of food for underfed children. His plan for dealing with this pressing problem constitutes an adaptation of the *cantine scolaire* system which works so admirably in Paris. Dr. Macnamara began by laying down three propositions: first, that no child shall go hungry; secondly, that parents who can *must* make due provision for the proper feeding of their children, and if they neglect this duty as a result of self-indulgence and drink they must be pursued with the utmost rigour of the law; and thirdly, parents who cannot make due provision for the daily feeding of their offspring in consequence of ill health, misfortune, or lack of employment must have that provision made for them without any suspicion of pauperisation. Dr. Macnamara certainly made it quite clear that he was wholly against relieving parental responsibility; as a matter of fact, his plan would strengthen any opposition to methods of charitable feeding that weaken the parental sense of obligation. He suggests, in the first place, the scheduling of the poorer urban areas for the purpose of feeding. The elementary schools would be grouped and a dining hall attached to each group. Parents would be invited to secure books of dinner coupons at the nearest municipal offices and teachers would be supplied with books to meet the cases of children unsupplied from home. All coupons would be printed precisely in the same way. Parents able to buy the books would have to do so; parents shown to be unable to purchase the books would be supplied with them gratuitously. At midday the children, each armed with a dinner coupon, would march off to the central dining hall and get a good meal of soup, pudding, rice, and the like. As to ways and means, he relied on voluntary contributions, on the sale of coupons, on special grants in aid from the Exchequer, and on the local rates making up any deficiency. In the opinion of Dr. Macnamara such a scheme as is roughly outlined above would not if put into general operation cause any very considerable charge upon the local purse. In London, according to Dr. Macnamara, a ½*d.* rate would be a generous provision. The question the London ratepayer has to determine is whether he will go on spending his school rate of 1*s.* 2*d.* with the assured knowledge that this expenditure is largely wasted where most needed—as a result of the physically unfit condition of the children—or whether he will make it 1*s.* 2½*d.* and thus secure a beneficent and fruitful return for the whole expenditure.

Dr. G. E. SHUTTLEWORTH, who also spoke on the subject, described how in the School Board institutions for special instruction children who needed it were supplied with nutrition, the parents being made to pay if possible. The effect of thus looking after the underfed children was that they improved mentally as well as physically.

Dr. J. KERR (medical officer to the London School Board) said that in regard to the children in London he was sure that the whole of the evidence in regard to underfeeding was exaggerated. There was no doubt, he considered, that many of the school children who were fed in London, so far as he could judge, were not suffering from being underfed. If a proper scientific examination was undertaken of the children in London the statistics of underfed children would in his opinion come out less than was now believed to be the case.

Sir JOHN GORST, who closed the discussion, said that if they looked at it from the hard standpoint of economy and banished from their consideration the suffering of the children who come more or less underfed to school he believed they would find that it would be good, sound economy to feed the children. He quite agreed that children should be protected by law against parental neglect. He observed, however, that in the industrial school system, where they professed to make parents pay, no very great success was achieved in securing that result.

THE CENTRAL MIDWIVES BOARD.

THE members of the Central Midwives Board met on Oct. 27th at 6, Suffolk-street, London, S.W., with Dr. F. H. CHAMPNEYS in the chair

The CHAIRMAN referred in sympathetic terms to the loss sustained by the Board through the death of Mr. J. Heywood Johnstone, M.P., and a resolution couched in suitable terms was passed which the chairman undertook to communicate to the family of the deceased member.

A letter from the secretary of the London Obstetrical Society, forwarding a copy of the evidence on which the society had acted in declaring the London Obstetrical Society's certificate of a certified midwife to be forfeited, was ordered to be produced later for discussion *in camerâ*.

A letter from the Town Clerk of Brighton, forwarding extracts from notes taken by the coroner of Brighton at an inquest held by him on April 15th, 1904, at which evidence was given by a certified midwife, was also directed to be considered *in camerâ*.

A letter containing a cutting from the *Fulham Chronicle* of Oct. 7th, 1904, giving a report of an inquest held by the West London coroner on Oct. 6th, 1904, at which evidence was given by a certified midwife, was also deferred for discussion *in camerâ*.

A letter from Dr. H. Handford, medical officer of the county of Nottingham, asking the opinion of the Board as to whether midwives who attend cases only with a medical man are bound to notify the local supervising authority of their intention to practise, was then considered.

The CHAIRMAN said his opinion was that the Board could not compel a midwife who attended cases only with a medical man to notify the local supervising authority.

Dr. J. WARD COUSINS thought that if a midwife put on her door that she was a certified midwife that might be considered to signify that the woman was holding herself out as a practising midwife.

Mr. E. PARKER YOUNG said the common-sense view was that if a midwife acted merely as a monthly nurse the Board

could not compel her to notify the local supervising authority. It was quite another matter if a woman put her name on her door as a certified midwife.

After some debate the conclusion was arrived at that women who were registered as midwives but not practising as such could not be compelled by the Board to notify the local supervising authorities.

The scheme of examination to be held by the Central Midwives Board was then considered and it was decided that the first examination should be held in July, 1905, because, as Miss R. PAGET pointed out, if it had been held in May, 1905, as originally intended, there would have been very few candidates ready to be examined.

The names of 1238 women who had sent in applications for certificates under Section 2 of the Act were ordered for entry on the roll. The following list gives the separate numbers of the various qualifications at present appearing on the roll, the total number amounting to 9470:—Royal College of Physicians of Ireland, 3; Obstetrical Society of London, 2953; Rotunda Hospital, 120; Coombe Hospital, 44; Queen Charlotte's Hospital, 194; Liverpool Lying-in Hospital, 138; British Lying-in Hospital, 5; Glasgow Maternity Hospital, 115; St. Mary's Hospital, Manchester, 120; Manchester Maternity Hospital, 24; City of London Lying-in Hospital, 46; Royal Maternity Hospital, Edinburgh, 25; Salvation Army Maternity Hospital, 13; National Maternity Hospital, Dublin, 9; Limerick Lying-in Hospital, 4; Cork Lying-in Hospital, 3; Eden Hospital, Calcutta, 2; and women in *bonâ fide* practice, July, 1902, 5652.

The Board then adjourned to Nov. 3rd.

RURAL HOUSING.

THE condition of housing, sanitation, and water-supply in many rural districts was the subject of an animated discussion at the annual meeting of the Rural Housing and Sanitation Association, held in the Indian Room of Lord Brassey's house in Park-lane. The association has now existed for two years and has done much towards remedying the defective condition of cottage homes throughout the country.

Mr. RIDER HAGGARD, in a brief address stirred his audience to a display of real enthusiasm. He admitted that the movement for securing decent housing for the rural population must excite animosity, especially from those who had to pay for the result of the influence of the association. He utilised the fact that the country was, as he put it, "on the edge of war" to drive home his argument that if England had to fight for its existence then the necessity would be felt for men and for men of the right sort, the men from the countryside. In the hour of need, it must be remembered, it was not money that was chiefly wanted, nor was it trade, but men; not men like those hanging about the music-halls or the bars but men of the magnificent stamp like his neighbours at Kessingland in Suffolk. The countryside was being denuded of men because there were no houses for them to live in. The Housing of the Working Classes Act was a complete failure and to build cottages was an unremunerative proceeding, so Mr. Haggard concluded that the best course to pursue was to make the present cottage property as decent to live in as possible and to induce the Government to adopt remedial measures making it possible for a population to live on the land and to make a modest living out of it.

A practical suggestion was contained in a communication received from the medical officer of health of the county of Northampton, Mr. C. E. PAGET. The proposal he put forward was that inspectors of nuisances should be qualified and competent persons holding certificates granted after an approved examination and that the consent of the county council should be required to their appointment in all districts where part of their salary was received from the county council. He gave a lucid explanation of how a great deal might be done towards preventing cottage property falling into disrepair by the active and timely interference of the properly authorised local officers. Under Section 30 of the Housing of the Working Classes Act, 1890, houses unfit for human habitation were reported to local authorities, but then it was too late in the majority of cases for repairs to be effected, so that greater and more helpful watchfulness over cottage property was required. To secure that being done efficiently it was necessary to have competent inspectors of nuisances. The Northamptonshire county council in January, 1903, passed a resolution to the effect that it was most desirable for borough and urban and rural district councils to appoint inspectors of nuisances possessing qualifying certificates of the Royal Sanitary Institute or some similar body approved by the Local Government Board. That resolution was, of course, to be commended and it was sent to the district councils in the county of Northampton, but in the two appointments of inspectors of nuisances that have occurred since the passing of that resolution, one of the officers appointed in August, 1903, did not hold an inspector's certificate. The attention of the Local Government Board was called to that fact but it confirmed the appointment because the officer had some experience in the duties of the office and proposed to sit for the necessary examination. In the case of the second appointment the officer chosen did not hold a qualifying certificate. By perfecting existing powers, much might be done towards securing the supervision of the dwellings of rural labourers by skilled persons and placing the whole question on a higher level than that usually accorded it by rural district councils.

Another useful contribution to the debate was afforded by Dr. MAY THORNE, who explained how inspectors of nuisances were hampered in their duty because the idea of being inspected was at the present time abhorrent to the large majority of people living in any district. She urged the association to educate people so that they would not be afraid of inspection but, on the contrary, would court it. That, of course, was a very high standard to aim at but when Dr. Thorne gave in detail her suggestions for minimising the spread of infectious diseases by reforming the housing of the rural poor she secured a very favourable reception from those present and her advice in regard to an adequate water- and milk-supply came in also for a large share of support.

Mr. CLAUDE HAY, M.P., very happily expressed what should be the key-note of the work of the association when he declared that the chief remedy for defective rural housing lay not in legislation but in organisation; and Miss C. COCHRANE warned Londoners to consider how one cause of the over crowding of the metropolis was the dearth of suitable cottages in rural districts.

The meeting terminated with a hearty vote of thanks to Lord Brassey for the use of his house.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Comitia was held on Oct. 27th, Sir WILLIAM SELBY CHURCH, Bart., K.C.B., the President, being in the chair.

The following gentlemen having passed the required examination were admitted Members: Guido Yule Giglioli, M.D.Florence; Eric Danvers Macnamara, M.A., M.B.Cantab., L.R.C.P.Lond.; and Harold Theodore Thompson, M.A., M.B. Cantab., L.R.C.P.Lond.

Licences were granted to those who had passed the recent quarterly examination.

A visitor of the examinations in tropical medicine in accordance with the report of the committee of the two Colleges of July 18th was appointed.

Communications were received from the secretary of the Royal College of Surgeons of England and from the Royal Sanitary Institute, inviting the College to send delegates to the conference of the institute on School Hygiene, to be held in London in February next.

The audited accounts for the year ending Sept. 29th were laid before the College and the quarterly report of the finance committee was received.

Reports were received: 1. From the committee of management recommending that the course of laboratory instruction in public health given at the Municipal Laboratories, Portsmouth, should be recognised as fulfilling the requirements of the regulations for the diploma in public health for a period of three years, the number of candidates for instruction in bacteriology being limited to three. Dr. F. Taylor, who retired by rotation, was re-elected. 2. From the laboratories committee. Dr. P. H. Pye-Smith, retiring by rotation, was re-elected.

Books and publications presented to the library during the past quarter were received and thanks were returned to the

donors. These included a manuscript copy of Boerhaave's lectures.

The quarterly report of the examiners for the Licence on the July examinations was received.

The Comitia then adjourned.

NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS.

AT the Chalfont Colony for Epileptics, established by the above-named society, of which the Prince of Wales is president, Lord and Lady Rothschild opened the Passmore Edwards House on Oct. 20th. This is the name given to a new building which is intended for administrative purposes and towards which the sum of £3000 has been contributed by Mr. Passmore Edwards. On the ground floor it contains the matron's rooms and the central kitchen of the whole colony. For its final completion two wings and a water tower will have to be added at a cost of £1800, which have not yet been provided.

The proceedings opened with a short service in the central recreation hall, which was conducted by the Rev. Roland Allen, vicar of Chalfont St. Peter. Over the meeting which followed Mr. Montefiore Micholls, the chairman of the executive committee, presided, and amongst those present were Lord and Lady Rothschild, Sir William and Lady Broadbent, Mr. and Mrs. Passmore Edwards, Dr. Buzzard, Mrs. Ferrier, Dr. Fletcher Beach, Sir Edmund and Lady Verney, Dr. G. E. Shuttleworth, Dr. W. Aldren Turner, and the secretary, Mr. G. Penn Gaskell. There were also present nearly 200 colonists.—Mr. MONTEFIORE MICHOLLS gave a brief introductory address, in the course of which he stated that Mr. Passmore Edwards had already, including the donation for this building, given a sum amounting in the aggregate to £18,500.—Sir WILLIAM BROADBENT, moving a vote of thanks to Lord and Lady Rothschild and Mr. and Mrs. Passmore Edwards, said that in this institution the colonists (for they were not called patients and did not look like patients) were engaged in useful work according to their different tastes and capacities and were bonded together in a really happy community, instead of being unhappy and merely useless units, a source of anxiety to their friends and in themselves miserable. It was quite true that the bond of that unity was suffering but that only made it a more touching and sacred bond and he was quite certain that it would appeal to the kind heart of Lady Rothschild to have seen the colonists assembled in such numbers. Of Mr. and Mrs. Passmore Edwards it was unnecessary for him to say anything because their work in that place spoke for itself and they were together possessed of that enthusiasm of humanity which had done so much for this institution and for the country. It was fortunate that the scheme and work of this institution met with the approval and sympathy of Mr. Passmore Edwards and to him more than to anyone else was due the great and comparatively rapid extension of the work of this colony. Lord Rothschild held a high position in the City of London and it was universally known that the charities and benefactions of the house of Rothschild were princely in their character. When two such men as Lord Rothschild and Mr. Passmore Edwards were united in support of an institution it could not fail to be a deserving one.—Dr. BUZZARD seconded the motion and, as a former member of the executive committee of the society, expressed delight at the progress which had been made at the colony during the last few years. He mentioned that it was only about 11 years since the movement for the establishment of the colony was first started.—Lord ROTHSCHILD, in replying to the vote of thanks, said that it gave Lady Rothschild and himself very great pleasure to see the amount of good which had been done by the colony in the county in which they lived and they felt that it was nearly all owing to the generosity of that great and good man Mr. Passmore Edwards who not only spent his money generously and well in that county, but wherever he thought there was need for it and wherever he thought he could do good. It was pleasant to think that in that happy colony, owing to the generosity of some and to the foresight of others, a large number of their fellow countrymen were, if not cured, at least helped to live a comparatively happy life and to escape the miseries of the disease under which they are suffering.—Mr. PASSMORE EDWARDS came forward in response to a unanimous call from the audience and remarked that the institution had been in existence for ten years and during that time they had erected ten buildings; he hoped that they would do at least as well during the next ten years. He complimented the colonists upon the assistance which they rendered to one another and upon their good conduct, by which they had strengthened the colony and made it worthy of imitation.—The guests then proceeded to the new building and Lady Rothschild performed the opening ceremony, after which the various homes and other buildings at the colony were inspected by the visitors.

MEDICINE AND THE LAW.

An Action to Recover Fees.

Two medical men in partnership at Shaftesbury brought an action which was tried in the King's Bench Division on Oct. 25th to recover fees amounting to £207 from the executors of Mr. Joseph Parke. Dr. James Duncan Walker, one of the plaintiffs, had attended the deceased at a hotel at which he had stayed at Shaftesbury and at a furnished house which he had taken in the neighbourhood. The patient had suffered from dropsy and cancer, there had been an operation at which Dr. Walker had assisted, which had lasted for three hours, and for which 25 guineas were charged, and for eight consecutive nights preceding the patient's death Dr. Walker had remained with him. For each of these nights ten guineas were charged. The deceased had told the plaintiff, Dr. Walker, that he would be well paid for what he did and had offered to leave him a legacy, which Dr. Walker had very properly declined. The position and means of the patient were shown by the fact that the legacies under his will amounted to £30,000 and it was also stated that he was exacting in his requirements. Medical men gave evidence on both sides, the opinion that the fees were reasonable being expressed on behalf of the plaintiffs and questioned by witnesses for the defendants. Mr. Justice Grantham appears to have summed up with the bluff common sense which is characteristic of him and to have guided the jury to a decision of a satisfactory character. His lordship pointed out that medical men often got nothing for attending poor people and asked why, "if they occasionally got a plum," it should be grudged them. "A man like the deceased," he pointed out, "going from hotel to hotel with no family to keep, could afford to pay more than a man with five times the income who had a family." He further observed that the trial arose out of an exceptional case of a man who wanted exceptional care. The jury found a verdict for the full amount claimed. Dr. Walker is to be congratulated upon having won his case, for the suggestion that a medical man has made an unreasonable charge for attendance is a disagreeable one. It is essential in estimating the reasonableness of fees to consider all the circumstances. When a patient is proved to be well able to pay, and when it is not denied that he desired and obtained a greater degree of personal attention from the medical man than others would have required, it is not unreasonable that a proportionately higher fee should be asked for. The question also is one upon which the medical man is himself better entitled to express an opinion than others. In the case in question the patient was a visitor to the neighbourhood, not likely, even if he recovered, to remain long as a patient of the medical man treating him, but at the same time insisting upon constant attendance of a kind likely to interfere with the demands of Dr. Walker's ordinary practice.

Cases of Scarlet Fever exposed in a Tramcar.

A mother, named Emma Cohen, was convicted at the Thames police-court on Oct. 29th and fined 40*s.*, with 44*s.* costs, for an offence which richly deserved the penalty inflicted. A medical man had been called in by her to attend her little boy, aged four years, and had found him to be suffering from scarlet fever. He had informed her of this and had forbidden her to take the child out, notwithstanding which she had conveyed him to the London Hospital in a tramcar and had there remained with him for some time in

the reception room where other patients were awaiting their turn for attention. The recklessness and selfishness of persons who can claim not to be "aware" of the presence of a notifiable infectious disease are not punishable, but in this instance the fact that a medical man had informed the defendant of the nature of her child's illness and had warned her as to her conduct disposed of any difficulty on this score. Another woman was fined at the same time for a similar offence.

The Drugging of Infants.

At Sheffield recently an inquest was held upon the bodies of twin children, 13 months old, who had died in such circumstances that the jury requested the coroner to censure both parents, although they did not consider themselves justified in returning a verdict of manslaughter. The evidence showed that the children were kept clean by the mother and were fed upon bread and condensed milk. With this they were given, as the mother herself admitted, as much as four teaspoonfuls each at one time of a mixture compounded by her or her husband. This, according to her account, contained a pennyworth of Turkey rhubarb, a pennyworth of "manna," and a pennyworth of laudanum. According to medical evidence magnesia and aniseed were also present in it, and the laudanum taken by each child would have amounted to about two drops at each meal. Death was ascribed to malnutrition arising from improper food and from the use of the drugs in question. A neighbour had warned the woman of the harm that she was doing her children, but she had persisted, and a medical man who had at one time attended them had found that his directions had been disobeyed by her. In these circumstances the parents were no doubt fortunate in escaping from a verdict which would have sent them for trial to the assizes, but the jury were perhaps to some extent influenced by the commonness of the practice of administering narcotics to children by parents among the ignorant poor in order to keep them from crying, and shrunk from punishing a particular instance.

Lithgow v. Gibb.

In our last issue we published a report of this case—a case of great importance to medical officers in practice in Scotland—but omitted to mention that the action was conducted for Dr. Lithgow by the Medical Defence Union. This fact should have been stated for the information of our readers.

Frost v. The Aylesbury Dairy Company.

The hearing of an important action for breach of warranty in respect of milk-supply was heard during the week in the King's Bench Division before Mr. Justice Grantham and a special jury. The plaintiff claimed that certain milk supplied to him by the company contained typhoid fever germs, the result being that his wife contracted fatal enteric fever. The plaintiff sought to recover the expenses which he had incurred in respect of his wife's illness and death. In this he was successful, the evidence, however, being liable to considerable misconstruction both on medical and general grounds.

REPORT OF THE MEDICAL OFFICER OF HEALTH OF CAPE COLONY FOR 1903.[1]

IN the voluminous report upon the public health of the Colony of the Cape of Good Hope Dr. A. John Gregory, the medical officer of health of the colony, laments that no report of the department has been issued since the year 1896. The reason adduced is want of time to draw up the report, but considering the dislocation of all official medical work, due to the disturbed state of the Colony during several years owing to the war, it can scarcely be wondered that the report has been in abeyance. Dr. Gregory, however, has presented a report which in its extent, its thoroughness, and its scientific acumen leaves nothing to be desired and is highly creditable to Dr. Gregory and all the medical men associated with him in his work. The labour entailed in dealing with so large a tract of country as that covered by Cape Colony throws upon a medical officer of health an amount of correspondence, of clerical and of committee work which may be described as prodigious; and when the ordinary public health routine is broken into by outbreaks of plague in many distinct centres the staff would require to be a large one to meet the occasion. The staff of the health department, however, consists of only two medical officers, a bacteriological assistant, and a medical inspector, and however strenuous their labours it is plain that practical work can leave but few spare moments for writing reports. It is satisfactory to know that in the estimates for the coming year provision is made for an additional assistant medical officer of health. It cannot, however, be said that the health department is officially upon a satisfactory footing, and it is to be hoped that in the near future the medical officer of health will be in effective charge of a properly defined sub-department, as in the other South African colonies. The value of the report is lessened by the fact that the statistics of births and deaths in the colony were not available for publication and seeing that the census of the colony was not taken since 1891 (until 1904) the publication of trustworthy vital statistics is impossible.

An outbreak of small-pox in many parts of the colony demanded close observation, even although the mildness of the disease and the very low death-rate, about 4 per cent., were marked. Enteric fever is a scourge in many parts of Cape Colony. During 1903 no fewer than 1785 cases of enteric fever were reported, of which number 1131 were Europeans, showing that amongst natives the prevalence of the disease was not fully notified. The deaths from enteric fever during the year amounted to 343, of which number 136 were Europeans. Diphtheria claimed 1249 victims but the notification was by no means complete. The diphtheric serum imported from the Lister Institute in London proved a most trustworthy antitoxin.

Although cases of plague were landed at Table Bay on March 5th, 1900, and although on Oct. 24th, 1900, a few cases were notified near King William's Town, it was not until February, 1901, that plague obtained a hold on Cape Town. On Feb. 1st a plague-infected dead rat was found at Cape Town docks and next day a European was attacked by the disease. A sharp outbreak of plague then occurred, lasting for about eight months, during which time 766 cases were discovered, with 371 deaths. The outbreak practically ceased towards the end of 1901 and the last case of plague in the Cape Peninsula was reported on Jan. 2nd, 1902. Plague, however, still continues at Port Elizabeth in a sporadic form. Leprosy and the segregation of lepers occupy a large part of the report. No one who reads the procedure followed, not only in determining the nature of the ailment but also in arranging what is best to be done with the leper, can come to the conclusion that lepers are hardly dealt with; on the contrary, every consideration is given to each case and every care is taken to render the leper's future as pleasant as possible in the depressing circumstances. A person suffering from leprosy is not condemned to the Robben Island Asylum until an opportunity is afforded of the leper's friends making proposals as to segregation at home. The life at Robben Island has no doubt hardships, but it is by far the most suitable place in which to isolate lepers anywhere within the wide extent of Cape Colony. The great objection to the island is that it also contains a convict prison and a lunatic asylum. This should be discontinued and lepers alone sent there, for it is much more difficult to find a place on the mainland for lepers than for a prison or a lunatic asylum. The agitation for the removal of lepers to the mainland has had the effect of checking the increase of the accommodation in Robben Island, with the result that the wards are overcrowded.

Tuberculosis is exceedingly common in Cape Colony and Dr. Gregory is of opinion that it will be a still greater scourge in the near future. There seems to be a general consensus of opinion that 20 years ago pulmonary tuberculosis was a rare disease in the colony, but with each year recently the returns show an increasing mortality from this complaint. A carefully conducted test of the efficiency of the Clayton gas as a germicide and rat destroyer was made by Mr. G. W. Robertson, the bacteriologist to the colony, and a most favourable report of the efficacy of the gas in these respects is recorded. From no fewer than 84 districts, exclusive of sub-districts, are reports contributed and in addition many reports from the native territories. Taking the report as a whole, it must be regarded as a monument of labour and as a model of official recording.

[1] Report of the medical officer of health for the Colony on the Public Health and on the Government and State-aided Hospitals of the Colony, together with the annual health reports of district surgeons and local authorities for the year 1903. Cape Town. 1904. Pp. 309.

ASYLUM REPORTS.

Govan District Asylum, Paisley (Annual Report for 1903).—The average number of patients resident during the year was 480, comprising 266 males and 214 females. The admissions during the year amounted to 260—viz., 152 males and 108 females. Of these, 227 were first admissions. Mr. W. R. Watson, the medical superintendent, states in his report that upwards of 48 per cent. of the patients admitted were in a more or less feeble state of bodily health. "In our investigations of the history of patients," he adds, "we have to reckon with deliberate misrepresentation; ..... there is a strong tendency on the part of the patients' relations to conceal other cases of insanity or allied neurosis which may have occurred in the family. ..... The statistician has to contend with the difficulty that his informant, if related by consanguinity to the patient, may possibly suffer from some unconscious bias which makes his evidence more than usually fallacious." Moreover, almost an unlimited patience is required in sifting the material from the irrelevant facts in the evidence given by relatives. "Few medical officers of asylums possess the imagination to perceive the relation of apparently isolated facts, and, as a matter of fact, one knows that the statistician usually sets out to 'prove' something, whether it be the fashionable doctrine of the moment or some theory of his own generated in the irresponsible play of his fancy and regarded by him with partiality." It appears, says Mr. Watson, that the personal errors inherent in this process are too great to allow of its yielding valid scientific results. If any real knowledge of the causes of insanity be possible it must be sought for and attained by broader methods of scientific research. "Thus we find that national excitement, political agitation, intemperance in drink, sexual excess, poverty, and even religious systems are seriously brought to account as primary causes. To anyone accustomed to view these and cognate social phenomena from the standpoint of biological science, such explanations are at best trivial." The number of patients discharged as recovered during the year amounted to 114—viz., 53 males and 61 females, or 24 per cent. of the average number resident. The deaths during the year amounted to 66, or 13·4 per cent. as calculated on the same basis. Of the deaths two were due to epilepsy, four to senile decay, six to pulmonary and other forms of tuberculosis, 11 to cardiac disease, 12 to cerebral hæmorrhage, 16 to general paralysis of the insane, and the rest to other causes. The small-pox epidemic in Glasgow and the neighbourhood interfered with the winter entertainments. Alterations and extensions have been made in day-room and dormitory accommodation for 32 patients. Considerable progress has been made in forming and planting the terrace to the west and south of the main buildings. The Commissioner in Lunacy states in his report that with a large and increasing population like that of the Govan district the present accommodation for lunatics will soon become exhausted and the district board is therefore engaged at present in formulating a scheme of asylum extension to meet future requirements. The asylum was found throughout to be in good order but there was an obvious need of whitewash and painting; the provision for dealing with outbreaks of fire required improvement in the matter of alternative exits; he added that pathological work was being carried on in the institution and that additional rooms for research were about to be provided; and that the medical case-books were found to be carefully and well kept.

Salop and Montgomery Counties Asylum, Wenlock (Annual Report for 1903).—The average number of patients resident during the year was 815, including boarders in Forden workhouse. The number actually resident in the asylum was 790, comprising 353 males and 437 females. The admissions during the year amounted to 199—viz., 89 males and 110 females. Of these, 152 were first admissions. Dr. Daniel F. Rambaut, the medical superintendent, states in his report that in order to relieve the overcrowding it was decided to board out 20 female patients at Abergavenny and inquiries have been made as to the possibility of boarding out more patients in workhouses. The causes of insanity in the admissions comprised hereditary predisposition, drink, childbirth, worry and anxiety, and other factors. The number of patients discharged as recovered during the year amounted to 55—viz., 18 males and 37 females, or 6·7 per cent. of the average number resident. The deaths during the year amounted to 111, or 13·6 per cent. as calculated on the same basis. Of the deaths two were due to general paralysis of the insane, five to cerebral hæmorrhage, seven to epilepsy, nine to pneumonia, 12 to senile decay, 17 to cardiac disease, 18 to influenza, 26 to pulmonary and other forms of tuberculosis, and the rest to other causes. Three coroner's inquests were held during the year and the verdicts returned were "Death due to natural causes," "Committed suicide by strangulation," and "Died from accidental scalds." During the year the construction of three outside staircases as special exits in case of fire was proceeded with. A large underground tank to hold 100,000 gallons of water as an auxiliary supply is in course of construction and is expected to be completed soon. The farm and garden account shows a profit of £344. In February, 1903, swine fever appeared and all the pigs had to be slaughtered and the pigsties disinfected in accordance with the instructions of the Board of Agriculture. The weekly cost of maintenance of patients has been 9*s.* 0½*d.* per head, as against 9*s.* 3½*d.* for the previous year. The committee of management states in its report that the sum of £536 has been spent in additions, alterations, and improvements. The question of the best means to be adopted in case of an outbreak of fire has been dealt with in a full report from the medical superintendent, and the committee has ordered the erection of a complete set of electric fire-alarms and indicators and certain other improvements. The committee is also of opinion that eight additional emergency exits, together with three outside iron staircases, should be provided for the older parts of the building in accordance with plans prepared by the surveyor. The estimated cost of these is £260 and the committee has applied to the county councils of Salop and Montgomery to sanction the expenditure of that sum for the purpose. The estimated cost of the underground tank to hold 100,000 gallons of water is £450. The committee has also adopted the suggestion of the medical superintendent that a grant of £2 per annum in addition to wages should be given to nurses and attendants who have obtained the certificate of the Medico-Psychological Association.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8651 births and 4383 deaths were registered during the week ending Oct. 29th. The annual rate of mortality in these towns, which had been 15·1, 15·2, and 15·9 per 1000 in the three preceding weeks, declined again last week to 15·0 per 1000. In London the death-rate was 14·7 per 1000, while it averaged 15·1 in the 75 other large towns. The lowest death-rates in these towns were 6·4 in Hornsey, 7·0 in Barrow-in-Furness, 7·3 in Newport (Mon.), 8·0 in Burton-on-Trent, 8·5 in West Bromwich, 8·6 in King's Norton, 8·9 in Leyton, 9·1 in Derby, and 9·3 in Southampton; the highest rates were 19·0 in Great Yarmouth, 19·6 in Hanley, 20·1 in Rochdale, 20·2 in Grimsby, 20·3 in Liverpool, 20·7 in Sunderland, and 21·5 in Merthyr Tydfil. The 4383 deaths in these towns last week included 394 which were referred to the principal infectious diseases, against 615, 573, and 532 in the three preceding weeks; of these 394 deaths, 119 resulted from measles, 109 from diarrhœa, 54 from diphtheria, 42 from "fever" (principally enteric), 36 from scarlet fever, 31 from whooping-cough, and three from small-pox. No death from any of these diseases was recorded last week in Willesden, Hornsey, Leyton, Hastings, Bournemouth, Handsworth (Staffs.), West Bromwich, King's Norton, Bury, Barrow-in-Furness, Huddersfield, or Newport; while they caused the highest death-rates in Plymouth, Walsall, Grimsby, Liverpool, Salford, Preston, York, and Middlesbrough. The greatest proportional mortality from measles occurred in Ipswich, Plymouth, Devonport, Walsall, Grimsby, Liverpool, Bootle, Salford, and Tynemouth; from scarlet fever in Plymouth; from diphtheria in Northampton and Swansea; from "fever" in Stockport, and Blackburn; and from diarrhœa in Oldham, Sheffield, Hull, Middlesbrough, and West Hartlepool. The mortality from whooping-cough showed no marked excess in any of the large towns. Two fatal cases of small-pox were registered last week in Oldham and one in Preston, but none in any other of the large towns. Only one case of small-pox remained under treatment in the Metropolitan Asylums hospitals on

Saturday, Oct. 29th and no new case had been admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2341, 2516, and 2687 at the end of the three preceding weeks, had further risen to 2725 at the end of last week; 305 new cases were admitted during the week, against 409, 377, and 389 in the three preceding weeks. The deaths referred to pneumonia and diseases of the respiratory system in London, which had been 166, 194, and 251 in the three preceding weeks, further rose last week to 289, and were 28 in excess of the number in the corresponding week of last year. Influenza was stated to be the primary cause of 29 deaths in London last week, against ten, 22, and 16 in the three preceding weeks. The causes of 30, or 0·7 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. The causes of all the deaths were duly certified in West Ham, Bristol, Leicester, Nottingham, Bradford, Leeds, Newcastle-on-Tyne, and in 55 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, St. Helens, Manchester, Rochdale, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 15·1, 15·8, and 16·5 per 1000 in the three preceding weeks, further rose to 16·7 per 1000 during the week ending Oct. 29th and was 1·7 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·3 in Perth and 15·6 in Dundee, to 19·4 in Leith and 23·0 in Paisley. The 554 deaths in these towns last week included 30 which were referred to diarrhœa, 16 to whooping-cough, six to measles, five to "fever," four to diphtheria, and two to scarlet fever. In all, 63 deaths resulted from these principal infectious diseases last week, against 71, 75, and 70 in the three preceding weeks. These 63 deaths were equal to an annual rate of 1·9 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 36, 31, and 26 in the three preceding weeks, rose again last week to 30, of which 17 occurred in Glasgow, four in Edinburgh, three in Dundee, two in Aberdeen, and two in Leith. The deaths from whooping-cough, which had been 20, 21, and 17 in the three preceding weeks, further declined to 16 last week, and included eight in Glasgow, three in Edinburgh, and two in Greenock. The fatal cases of measles, which had been three, five, and eight in the three preceding weeks, declined again last week to six, of which five were registered in Aberdeen. The deaths referred to different forms of "fever," which had been six and seven in the two preceding weeks, declined again to five last week, and included two in Glasgow. The deaths attributed to diseases of the respiratory organs in these towns, which had been 73, 76, and 95 in the three preceding weeks, further rose to 103 last week, and were exactly equal to the number in the corresponding period of last year. The causes of 21, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 17·5, 21·6, and 24·9 per 1000 in the three preceding weeks, declined again to 20·6 per 1000 during the week ending Oct. 29th. During the past four weeks the death-rate has averaged 21·2 per 1000, the rates during the same period being 14·9 in London and 14·7 in Edinburgh. The 150 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 31 from the number in the preceding week and included 16 which were referred to the principal infectious diseases, against 15, 12, and 18 in the three preceding weeks; of these, six resulted from diarrhœa, four from measles, two from scarlet fever, two from whooping-cough, one from diphtheria, and one from "fever." These 16 deaths were equal to an annual rate of 2·2 per 1000, the death-rates last week from the same diseases being 0·9 in London and 1·4 in Edinburgh. The fatal cases of diarrhœa, which had been ten, eight, and 11 in the three preceding weeks, declined again last week to six. The four deaths from measles showed a decrease of two from the number in the preceding week. The 150 deaths in Dublin last week included 33 of children under one year of age and 31 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were considerably below the respective numbers recorded in the preceding week. Five inquest cases and three deaths from violence were registered, and 49, or nearly a third, of the deaths occurred in public institutions. The causes of three, or 2 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeon F. Bradshaw to the *Sutlej*. Surgeons: C. J. E. Cock to the *Sutlej*; A. F. Mackay to the *Royal Oak*; and F. C. Robinson to the *Hogue* and to the *Widgeon* on commissioning.

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned has been appointed Surgeon, viz.:—Arthur Douglas Cowburn (dated Oct. 28th, 1904).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Majors to be Lieutenant-Colonels (dated August 2nd, 1904):—W. C. Beevor, C.M.G., J. Maher, G. D. Hunter, D.S.O., J. R. Mallins, H. N. Thompson, D.S.O., N. Manders, S. F. Freyer, C.M.G. (provisional), Brevet Lieutenant-Colonel C. Birt, and R. S. F. Henderson.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Caithness: Surgeon-Captain D. Durran to be Surgeon-Major (dated Oct. 29th, 1904). 2nd Cinque Ports: Surgeon-Lieutenant C. R. Skyrme to be Surgeon-Captain (dated Oct. 29th, 1904).

Rifle: 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: Peter George Moran to be Surgeon-Lieutenant (dated Oct. 29th, 1904). 2nd Volunteer Battalion the King's (Shropshire Light Infantry): The undermentioned Surgeon-Lieutenant-Colonels are granted the honorary rank of Surgeon-Colonel:—R. de la P. Beresford (dated Oct. 29th, 1904) and C. H. Gwynn (dated Oct. 29th, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Manchester Companies: Captain R. W. Clements, R.A.M.C., to be Adjutant, vice Major H. D. Mason, whose period of appointment has expired (dated Oct. 12th, 1904).

THE EXPANSION OF THE ROYAL ARMY MEDICAL CORPS IN TIME OF WAR.

We may direct our readers' attention to the reprint of a paper on this subject by Lieutenant-Colonel W. Contes, R.A.M.C (Vol.), Manchester, from the *Journal of the Royal Army Medical Corps* for October. The author points out the impracticability of maintaining the Royal Army Medical Corps during peace in sufficient strength to deal with all the medical and surgical problems and requirements of war and as the result of many years' observation and experience he arrives at the conclusion that the most sensible, efficient, and economical method of expanding the corps would be through the medium of the various divisions of the Royal Army Medical Corps (Volunteers). He briefly describes the establishment, methods, and *personnel* of the particular organisation which he claims ought to be the natural means through which such expansion should take place and outlines a scheme by which he thinks it might be successfully accomplished. The subject is obviously a very big and important one in the present day and especially with what is actually taking place in Manchuria for our guidance and instruction. The great strength of the belligerent forces brought into the field in modern war, the vast extent of ground covered by them, and the quick-firing rifled nature of the weapons employed all tend to make it more and more difficult, indeed impossible, for any ordinary medical methods to cope with battlefield requirements. What is wanted, and what will have to be done, is to settle on the simplest possible methods of promptly dealing with the wounded and to obtain the largest possible amount of available subordinate medical aid in applying them. That the task is not so impossible as it once appeared to be is becoming clearer owing to the application of antiseptic methods and to an increasing recognition of the fact that the expectant treatment has a wider application than was once supposed in regard to the wounded in war.

DEATHS IN THE SERVICES.

Deputy-Inspector-General of Hospitals and Fleets William Ross, R.N., on Oct. 31st, at Bulham, aged 81 years. He entered the service as surgeon in 1845 and reached the rank of deputy-inspector-general in 1881 when he retired. He served as assistant surgeon of the *Calliope* and was present at the attack and capture of Ruapekapeka (Kawiti's) Pah, in the Bay of Islands, in the action in the Horokiwi Valley, and in the various other engagements of the New Zealand war 1846-48 (New Zealand medal). In 1851, as assistant surgeon of the *Virago*, in the Pacific, he was at the capture of Chilian pirates in the Straits of Magellan, and in 1853 he was in medical charge of exploring expeditions across the Isthmus of Darien, from the Pacific to the Atlantic. Subsequently he took part in the search for, and relief of, the lost United States exploring expedition from the Atlantic to Darien Harbour, under the command of Lieutenant Strain, U.S.N., and received the thanks of the United States Navy Department. During the Russian war in 1854 he was at the bombardment of the batteries of Petropaulovski, in Kamschatka, by the combined English and French squadrons, and afterwards landed there in the attack on that settlement. In 1855 he served as surgeon in the *Vesuvius* in the Black Sea and the Sea of Azoff, and in 1857 and 1858 in the *Assurance* in India and Burmah during the Indian Mutiny. He received a Greenwich Hospital pension in 1895.

THE LATE MISSION TO LHASA.

We surmised recently that it would not be long before a work would be forthcoming descriptive of the recent expedition to Tibet. Messrs. Hurst and Blackett have, we understand, a book in the press compiled by Mr. Percival Landon, who accompanied the expedition as special correspondent of the *Times*; Colonel Younghusband, the commander of the mission, has contributed an introduction to the volume. The expedition affords plenty of material of a very varied nature—political, topographical, natural history, and medical—quite sufficient to make up an interesting and instructive book.

THE NORTHERN AND SOUTHERN NIGERIA OPERATIONS.

In despatches relating to operations in Nigeria published in the *London Gazette* of Oct. 28th, the following passage occurs: "Credit is due to the medical officers attached to the forces engaged in the above operations, and the efficiency of the medical aid rendered reflects very favourably on the administration of the medical department."

THE WAR IN THE FAR EAST.

What is known as the North Sea outrage presents points of psychological and medical interest. The evidence seems overwhelming that no Japanese or British torpedo boats were, or could have been, among the Dogger Bank fishing craft: the Russian naval officers were here completely mistaken. The view which appears to be commonly held on the continent is that one part of the Russian fleet fired into another portion of it under the mistaken notion that it was simply defending itself against an enemy's torpedoes; on the other hand, the explanation of the fishing craft having been fired into is thought to be ascribable to some mistake having arisen on the part of the Russians in interpreting a newly adopted system of signalling into their service with which their sailors were still imperfectly acquainted. Be this as it may, if those on board the Baltic fleet were in the highly neurotic state that has been ascribed to them they were in a sufficiently suitable frame of mind to have conjured up all sorts of visions and to have fallen into all sorts of mistakes. It is to be hoped that we shall learn in due time the actual facts of the case. There can meanwhile be no doubt about what these were as far as they affected the unfortunate fishermen. The *Pesther Lloyd* suggests satirically that the International Commission of Inquiry should also include a specialist in nervous diseases, as without him it will not be possible to arrive at a comprehensive judgment.

As regards the progress of the war the lull which was present last week still continues, but the suspension of hostilities in Manchuria seems likely to be soon followed by important developments. Port Arthur still holds out despite frequent and increasingly severe assaults. We know next to nothing about the amount of disease existing in its sorely tried, beleaguered garrison. The general staff, St. Petersburg, has issued a statement to the effect that the number of killed, wounded, and missing in the fighting in Manchuria from Oct. 9th to 18th is 800 officers and 46,000 men. The troops on both sides are said to be suffering terribly from the cold and want of fuel. Miss McCaul, who has returned from her mission to the Far East, whither she went in order to study the working and operations of the Japanese Red Cross Society, gives a highly eulogistic description of the Japanese hospital and nursing arrangements, of the success of their surgical and medical treatment, and indeed of all she saw at the seat of war. As this lady had previous experience of our own hospital system in the South African campaign she has had an opportunity of comparing one system with another and is consequently qualified to form a tolerably correct judgment in regard to their respective merits. The working of the Japanese field hospitals and their medical equipment and ambulance appliances, as well as the emulation and *esprit de corps* among the members of their medical service, are described as excellent.

The *Novosti* quotes Professor Visokovitch's lecture on his observations and experiences at the seat of war, from where he has returned. He stated that the sanitary condition of the army was very satisfactory. The most serious illnesses afflicting it were bowel complaints, the number of cases of which had reached 1792 by August 2nd. With the decline of the heat these complaints also declined. The insignificant number of infectious diseases in the Russian Manchurian army he attributes chiefly to the climate of the country. It had some peculiarities, not yet explained, in consequence of which there were no bugs, fleas, or gnats, and where there were no gnats there was no malaria. The preventive measures taken had also had their effect. The medical department of the army had worked admirably. The hospitals were ample and many up to the date above mentioned, for want of work, had not begun to operate. The army hospitals were well fitted and the Red Cross hospitals were simply and appropriately furnished; those on a special footing, were luxuriously furnished.

From an article in the *Times* of Nov. 1st on the Red Cross Hospital at Tokio we quote the following: "Lastly, a few words must be said regarding a branch of the Red Cross Society called the 'Ladies Volunteer Nursing Association.' Thousands of bandages have been rolled by these willing helpers, who meet five times a week in a large room in the hospital. Princesses, nobles, Japanese and foreign ladies give their time on stated days and sometimes work for eight consecutive hours. In less than two months 30,000 bandages were despatched to the front, each one having been sterilised and examined, no badly rolled one being allowed to pass. At present, thousands of small parcels are being packed containing field dressings for each soldier to have in his pocket. A short time ago the ladies in Tokio were requested to send 5000 knitted cholera belts by a certain date, now they are knitting socks and caps for the winter. But nothing is left to chance and as each article is made according to written directions it is perfect."

Correspondence.

"Audi alterem partem."

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 22nd (p. 1179) "A Layman" writes in general praise of the objects of the fund and its administration but he wonders, as many do, that so good a fund is not more generally supported. He seems to feel some doubt as to its business organisation. Some of these doubts I could have solved if he had given me the opportunity. His letter is calculated to have an effect he evidently did not wish and to leave an erroneous impression upon the mind of the casual reader. In order to remove any such impression I desire in fairness to the fund to state a few facts. The fund was originally started in the year 1836 with the object of giving grants of money to cases of urgent necessity. It was soon found that some of the grants had to be renewed annually and to meet these permanent charges an investment fund was started. Thus from the commencement the fund had two divisions, the one for annuities and the other for grants. The annuities are paid out of the income derived from

invested capital. This annuity fund is the backbone of the charity, and in order to strengthen it it is the rule that legacies and donations should not be spent but invested in trust securities. To place any business upon a secure footing a strong reserve is necessary. The annuity fund is our reserve and we may point with some pride to the fact that by this policy we have been able to increase the number of annuitants during the last 20 years from 51 to 123—that is to say, to raise our permanent income from £1170 to £2500 per annum. The progress is shown in the following table:—

	Income from invested funds.			Number of annuitants.
	£	s.	d.	
1883	1170	1	3	 51
1888	1413	6	0	 65
1893	2155	6	3	 104
1903	2504	5	3	 117

The number of annuitants this year will reach 124, so that 20 annuitants have been added to the list in the last five years. In other words, our permanent income has been increased by £400 a year. This statement gives a complete answer to one of the criticisms of "A Layman" that our income shows great fluctuation and but little permanent increase. He did not take into account the annuity branch and spoke only of the funds of the grant department. The two are intimately connected and cannot be separated. Every increase in the annuity fund is a corresponding relief to the grant fund, for in cases of permanent incapacity as soon as the age-limit, 60 years, is reached the case passes automatically, if in other respects suitable, on to the list of annuitants and the transfer thus sets free the amount of the grant for some other case. The grant department must, however, always be a source of anxiety, for it is not the object of this department to save money but to spend it. The more we get the more we spend and ought to spend, for the money is given to be spent and not hoarded. What we will not do is to spend what we have not got and run into debt. Nor will we, to meet temporary pressure, borrow money from the annuity department and thus diminish our reserves. We prefer to confess our poverty and to appeal to the profession and public for further support and so far we have never failed to obtain a satisfactory response. This department must always be poor, for the number of distressing cases is constantly increasing and will continue to increase the better and more widely the fund is known.

If the fund shows one evidence of business organisation in maintaining a strong reserve fund it shows another, I think, in the strictness with which its accounts are kept. The accounts are audited every year by a professional accountant. For some years the audit was made unofficially by a member of the firm of Deloitte, Dever, Griffith, and Co., but two years ago this firm expressed itself so well satisfied with the state of our accounts that it offered to allow its name to be placed upon our books as the official honorary auditors of the fund. This offer, unsolicited and unexpected, from such a well-known firm, was a very high compliment to our business organisation which no doubt "A Layman" will appreciate. Nor is this the only testimony of the kind. About five years ago a sum of money was left to be distributed among charitable institutions on condition that the executors were satisfied with their financial administration. The executors inspected our books and sent us a complimentary letter, inclosing a cheque for £200.

"A Layman's" contention is that so good a fund only requires to be sufficiently known to command ample support. I agree with this, and the question is, How can its claims be brought home? Experience proves that mere advertisement hardly pays its costs. The number of people who read such charitable advertisements and respond to them is small, their names soon become known, and they are inundated with appeals of every kind. No mere advertising can take the place of personal advocacy. This personal factor we endeavour to supply by honorary local secretaries. Their number might well be much greater than it is, but it is not everyone who is willing to undertake these duties or, indeed, is fitted for them. The committee is always asking for volunteers and gladly welcomes them.

Occasional appeals such as that recently made by Sir William H. Broadbent, which are rendered necessary by sheer poverty from time to time, attract more attention and do more good, both present and future, than any ordinary advertisement. Yet we do not neglect certain forms of advertisement either. The editors of the medical journals, especially of THE LANCET and the *British Medical Journal*, lend us their help by publishing every month an abstract of the business done at the committee meeting and by opening their columns very willingly to any special letter or appeal we send. To the *British Medical Journal* we are particularly indebted for a very large and gratuitous advertisement. It places upon the notice of subscription sent at the beginning of the year to all its members, 22,500 or thereabouts in number, special lines for contribution to the two great medical charities, the British Medical Benevolent Fund and the British Medical Benevolent (Epsom) College. "A Layman's" suggested remedy is that the fund should appoint an experienced secretary at a high salary. Of course, mere secretarial work is already provided for, and it is not for clerical work but for collecting money that the suggested secretary would be appointed. I admit that the ideal man contemplated would be worth his weight in gold. Yet at most of our charities it is not, as a rule, the secretary who obtains the money but some active enthusiastic unpaid volunteer who suggests and directs the secretary's work; nor do the secretaries, as a rule, occupy the position in life or in the profession which enables them to speak with authority and act with influence. Given the ideal man, he would be worth any price; still, it would be easy to pay a good price and not get the good man. Of course, these questions have been carefully and anxiously considered by the committee many times, but the committee has hesitated hitherto, and I think rightly, to establish an expensive office and staff which, once established, could not well be given up again. £1000 a year extra might easily be spent upon office expenses, as it actually is in some societies similar to our own. All told the working expenses of our fund now amount to a little less than £240 a year. The question for business men to consider is this, Would an office and staff such as "A Layman" contemplates produce an additional £1000 a year? If it did it would only just cover its expenses. If not, the fund would be a loser.

Nothing will take the place of personal enthusiasm and advocacy. This is what we want, and if anyone will provide more of it we shall be very grateful. We welcome "A Layman's" letter as coming from a sincere though candid and critical friend. I wish he would reveal his identity and by active personal interest assist the fund he so warmly commends.—I am, Sirs, yours faithfully,

SAMUEL WEST, M.D.,
Wimpole-street, W., Oct. 28th, 1904. Treasurer to the Fund.

THE TREATMENT OF BLOOD POISONING BY PERCHLORIDE OF IRON.

To the Editors of THE LANCET.

SIRS,—In connexion with the subject of the treatment of blood poisoning by perchloride of iron, which is attracting attention at the present time, it is of interest to recall the strong recommendation of this agent as a remedy in cases of erysipelas which was first brought to the notice of the profession in 1851 by Mr. G. Hamilton Bell of Edinburgh.[1] The remedy was thus introduced about half a century before the intimate pathogeny of erysipelas as a streptococcic infection was known, once more illustrating the fact that therapeutics have occasionally anticipated pathology. This practice was systematically taught at Edinburgh in my time and I have seldom substituted any other for it. The point of supreme importance in the matter is to employ only large doses of the tincture, from 15 to 25 minims every two hours. Dr. Charles Bell, brother of Mr. Hamilton Bell, suggested this remedy as likely to be of value in cases of puerperal fever and urged that it should be "used with boldness." It is further of interest now to review Sir J. Russell Reynolds's recommendation of the chalybeate treatment for rheumatic fever which, when he urged it, appeared to clash with the prevalent line of alkaline medication. Now that we have learned to regard rheumatic fever as an infection by a micro-organism allied to the streptococcal genus, if not actually a member of it, we may conceive that his suggestion has a different bearing from that formerly assigned to it even by the author himself.

I might remark, incidentally, that some of the older

[1] Edinburgh Monthly Journal of Medical Science, vol. xii., 1851. Paper read before the Edinburgh Medico-Chirurgical Society, April, 1851, with note by Dr. Charles Bell.

practitioners had a higher opinion of the qualities of the tincture of the sesquichloride of iron of the London Pharmacopœia of 1851 than of the preparation which replaced it in the subsequent British Pharmacopœia, and I think they were right.

I am, Sirs, yours faithfully,

Oct. 31st, 1904. DYCE DUCKWORTH.

THE BOILING OF MILK.

To the Editors of THE LANCET.

SIRS,—Most authorities, it would appear, agree that boiled milk and sterilised milk have less nutritive value than that which is fresh. Dr. Brouardel says that milk warmed in a receiver directly exposed to the fire loses at 85° C. some 28 per cent. lecithin, but when treated in a "bain-Marie" only about 12 per cent. Obermeyer states that cow's milk contains from 1·2 to 2 grammes of citric acid per litre. On heating the citric acid is greatly reduced (five minutes' boiling reducing it 31·9 per cent.). Heated over a water bath it loses less citric acid than over an open fire. In the former method at 75° C. after 15 minutes only 4·13 per cent. of its citric acid is lost. The chemical reaction is probably that the soluble bicitrate of calcium is converted into a less soluble tricitrate of calcium. Dr. Blackader says that at 70° C. (158° F.) the proteids are modified and rendered apparently less digestible, the salts are less readily absorbed, and the natural ferments are destroyed. Dr. J. L. Kerr says that the chemical result of boiling is to kill all the living cells and to coagulate the albuminoid constituents. The physiological result is that there is a distinct loss of vitality in the milk because the living cells do not enter into the circulation direct as living protoplasm and build up the tissues direct as they would do in fresh unboiled milk. Professor Koch says that pasteurisation and sterilising milk cause it to lose many of its good qualities. Professor Behring asserts that boiling destroys the nourishing qualities of the albumin. Dr. Bruch says that boiling milk, besides depriving it of some of the volatile fats, causes some of the albuminoids to become insoluble, and the insoluble material, instead of undergoing the natural digestive stomach changes, usually passes into the intestine unchanged and often leads to putrefactive fermentative disturbances. Scurvy is one of the diseases that results from a devitalised diet but it is not necessary that a child should absolutely suffer from scurvy to indicate that the food is improper. The evidence adduced shows clearly, I think, that boiled milk, at any rate, for a continuance, is not a proper food for an infant.

I am, Sirs, yours faithfully,

Bexhill-on-Sea, Oct. 29th, 1904. F. P. ATKINSON.

THE EAST LONDON MEDICAL SOCIETY AND THE LONDON HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Since the appearance in the public press of the report of the quarterly meeting of the governors of the London Hospital many comments have been made on it and allusion has been frequently made to the East London Medical Society, so much so that the society feels that it is necessary to define clearly its position in order that there may be no misunderstanding as to the object it is striving for.

Last May a deputation of the East London Medical Society waited on the board of management of the London Hospital to ask for a reform of various abuses in the management of the hospital. The abuses complained of fell under two main heads: (1) the part payment system under which patients are expected to pay a proportion of the cost of the medicines and dressings supplied to them; and (2) insufficient scrutiny, whereby patients who are well able to pay for treatment privately are enabled to take advantage of a public charitable institution.

The existence of abuses was admitted by the hospital authorities and it was shown that in one important branch, the casualty department or receiving-room, the scrutiny was not merely imperfect but practically non-existent, for the addresses of patients were not asked, all comers being treated without question as to their means. The steps proposed by the hospital for the abatement of the evil have now appeared in the press and it is principally on them that the East London Medical Society wishes to express its views.

1. Large notices have been placed in the out-patients' department stating that a small charge is made for medicines and dressings, but no charge for advice.

The part payment system which is thus affirmed is objected to by medical practitioners because they find that it induces many patients who are too well off to deserve hospital relief to go to hospitals for treatment in the belief that they are paying for all they receive and so are not receiving charity, and it also acts as a salve to the consciences of others who go to hospitals knowing that they have really no right to hospital relief. The society holds that notices should be placed in all departments of the hospital and on the cards issued to patients that the institution is for charitable relief only.

2. The addresses of all patients will be taken and the books open to the inspection of any local practitioner who cares to inspect them.

The registration of addresses is so obviously necessary in any inquiry as to the means of the patients that it is amazing that it should ever have been neglected; but the inspection of the books by local practitioners is a part of that system of espionage to which the society strongly objects.

3. Local practitioners are invited to visit the out-patient department and on recognising any patient known as being unsuitable for hospital treatment asked to communicate with the secretary.

This suggestion, which invites medical men to act as detectives, was made to the deputation of the society at the hospital and was rejected as quite impossible. The hospital would have shown better taste had it let the suggestion drop instead of repeating it and allowing it to go to the press.

4. The Jewish board of guardians have been approached and have consented to help the hospital in making inquiries with regard to Jewish patients.

The intimate acquaintance of the Jewish board of guardians with the Jewish poor should be a great help in eliminating unsuitable cases.

5. The Metropolitan Provident Dispensary, which has a branch opposite the hospital, has agreed to take over any patients sent from the hospital at a reduced charge.

The society has been informed that the dispensary intends to institute a further inquiry to ascertain whether the patients are poor enough to deserve dispensary treatment. Without this the hospital plan would be most futile, for large numbers of patients now treated at the hospital are well able to pay the fees of a private practitioner and consequently have no right to go to either the dispensary or the hospital. It is not easy to see why most of the unfit cases should not be referred direct to private practitioners, for the difference between payment for medicine and dressings at the hospital and reduced payments at the dispensary cannot be very great.

6. The committee is in communication with the Charity Organisation Society and it is hoped that this society will be able to advise the hospitals as to the best means for inquiring about patients, while the hospital is willing to pay £100 per annum to the society for an almoner to be stationed in the receiving rooms.

This should lead to an improvement in the inquiry system and so to more efficient detection of offenders.

7. The secretary has made arrangements to visit every patient admitted on the day after arrival and if it is found the patient should not receive hospital treatment he or she is to be discharged and asked to give a donation for the time he or she remains in the hospital.

This is not an entirely practicable suggestion. In a hospital where the admissions are so numerous (sometimes, it is said, as many as 60 in a day) it is not possible for a busy man like the secretary to inquire into the circumstances of them all. By all means let any urgent case be admitted at once without inquiry, but whenever there is no urgency the admission order ought not to be given until an inquiry has shown that the case is one suitable for hospital relief. The society greatly regrets that no rule has been made that all patients whose means are sufficient to enable them to pay the fees of a private practitioner shall be refused any attendance beyond first aid. In this way a considerable economy of the hospital funds might be effected.

In conclusion, the society, while recognising the extreme difficulty of preventing abuse, wishes to point out: (1) that at present advantage is taken of the lax inquiry system by a large number of persons who ought not to receive charitable relief and who in many instances are really wealthy; (2) that the funds supplied by the charitable are thus misappropriated, the persons for whom they are intended being often deprived of relief in consequence; (3) that the medical profession is subjected to a most unfair competition with subsidised institutions; (4) that the indiscriminate administration of relief tends to pauperise many of the recipients and to lessen habits of thrift; (5) that with more efficient means of preventing abuse the poverty of hospitals would

be diminished, perhaps even abolished; and (6) that the hospital authorities must not forget in delegating their duties of scrutiny that *they* are primarily responsible to the charitable public for the proper expenditure of the monies subscribed.

I am, Sirs, yours faithfully,

F. HARRIS WHITE,
Honorary Secretary, East London Medical Society.

Nov. 1st, 1904.

INTOLERABLE INGRATITUDE.

To the Editors of THE LANCET.

SIRS,—It seems to me that the wide publicity of your columns may be well invoked effectively to emphasise the following statement of protest which I addressed to Mr. Justice Lawrance in the King's Bench Division of the High Court in the case of Buckley, a cabman, *versus* Evans, a butcher, to attend which under subpœna the whole of my work and engagements and my patients' convenience were deranged through last week.

My Lord,' before being sworn, I wish, with all respect to yourself and your office, to make a statement emphatically protesting, on behalf of myself, as a humble representative of so many of the most famous in my profession, who give cheerfully, freely, unstintingly, and without any money recompense, of the best of our professional skill, time, experience, and judgment, for the gratuitous relief of the poor and poorest, with physical ills or injuries.

It seems to me, my Lord, that, to enforce my attendance here, as a common witness, under subpœna served, with conduct coin, on me, on the front steps of the hospital, as if I were a writted rogue, on behalf of the plaintiff whose case, as to its medical needs, it is alleged, received my charitable attention there, is a gross prostitution of philanthropy, an altogether indecent assault, an intolerable, if not indefensible ingratitude; incomparably more base and contemptible than that of the cur which bites the hand that feeds him.

I have represented to the plaintiff's solicitor and counsel that attending here as I am, and have been every day this week, to the total derangement of all my professional work, under subpœna as a common witness, I shall testify only to fact, which cannot advance the plaintiff's cause, and that I shall not give any opinion which would entitle me to that consideration, as an expert witness, which I exact, as I am entitled to do, when engaged in that capacity.

Mr. Justice Lawrance, assuring me of his full sympathy, remarked that the poor cabman probably believed my evidence would be very material to his case and he, not being able to pay expert witnesses' fees, had done what it was within his power to do to secure the advantage of my testimony and I had now only to be sworn and to answer the questions put to me. I replied: "Certainly, my Lord, my attendance has been exacted; my evidence as to matters of fact, but not as to any matter of opinion, is available."

The ensuing examination resulted in my recognising a memorandum (privileged) which I had courteously made on the card of the plaintiff's doctor, an old student of mine, which it was alleged the plaintiff, whom I was not asked to identify, had brought to me on one of the occasions when it was alleged I had seen him, but not necessarily myself examined him, at the Royal Eye Hospital. Of course I would recall nothing to do with the patient, a possible one of the many thousands of hospital patients attended by me, and I had, of course, been careful not to risk reviving, by reference to hospital records, my memory as to the plaintiff's alleged visits to the hospital and my observations thereon.

Anything approaching to the frequent repetition of such outrageously vulgar tactics as those by which I was victimised last week would necessarily preclude busy medical men from exposing themselves thereto by that whole-hearted gratuitous professional devotion with which it is our pride and pleasure to be able to serve the afflicted poor. Such a calamity cannot be calmly contemplated, hence this further protest from

Your obedient servant,

MALCOLM M. MCHARDY.
Savile-row, W., Nov. 2nd, 1904.

MEDICAL CHARITIES.

To the Editors of THE LANCET.

SIRS,—Sir William Broadbent's letter on behalf of the British Medical Benevolent Fund appeared just at the time of the recent French medical visit and may therefore have been overlooked by many of your readers. Allow me to call attention to the recently published lists of subscriptions for the entertainment of our French *confrères*, which yield the following results on analysis: 240 practitioners subscribed two guineas each and the majority made themselves liable for another two guineas should they be needed. Of these 240 London practitioners only 68 are subscribers to the British Medical Benevolent Fund and 98 are subscribers to Epsom College. Comment is not necessary, but it may be fairly suggested that the guaranteed guineas, if not needed, should be divided between the two medical charities.

I am, Sirs, yours faithfully,

VINDEX.
Oct. 31st, 1904.

TEMPERANCE AND TYPHOID FEVER AT PHILADELPHIA.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Philadel hia, U.S.A., Oct. 21st.

FOR many years the sanitary reputation of the city of Philadelphia has been open to one serious reproach. Its beautiful streets, its monumental town hall, the wealth and prosperity of its commercial men, and the virtues of its Quaker population have not served to conceal the fact that the people derived their drinking water from a sewage-contaminated river and suffered severely in consequence. This is the more unfortunate as the exaggerated phases of the temperance movement are more fully exemplified in the town of Philadelphia than in most places. Here on Sundays no wine or beer can possibly be obtained, not even in the traveller's own hotel. It is true that if he is confined to his bedroom, and presumably ill, alcoholic beverages may be brought to him but not at his dinner if served in the dining room or in any other public or semi-public place. At meals in the majority of private houses the only beverage served is iced water. In the estimation of many to call for wine or beer at meal times would be to lose caste. But before attempting to transform the inhabitants into water drinkers the very first thing to be done was to secure an absolutely pure and abundant water-supply. To force the public to drink diluted sewage instead of beer can scarcely be defined as a temperance measure and its benefits are doubtful. Drunkenness is an abomination but the frequent occurrence of as many as 300 new cases of typhoid fever in the course of a single week is scarcely an improvement. It would take a good deal of dram drinking at saloon bars to produce as much mischief. The innocent temperate drinker might be allowed hygienic drinks such as pure wines and beers at his meals instead of being exposed to typhoid infection because of the drunken excesses of a small minority of the population. In any case the temperance movement has led to this, that even those who do occasionally drink alcohol in some form are also made to drink a large quantity of cold water. It is but natural to suppose that the pathogenic germ if taken in small quantities is less likely to be effective in producing disease. But if, in the hope of drinking water that has been boiled, coffee or tea is ordered the American waiter is sure to bring first a glass of iced water. Then, especially among the ladies, an extraordinary consumption of ice-creams takes place daily. In such circumstances the purity of the water-supply is a matter of primary importance and the temperance reformer should have seen to this first before attempting such legislation as would compel people to drink water when no pure water is obtainable.

The only water available in Philadelphia for drinking purposes is derived from the Delaware and Schuylkill rivers. The Schuylkill water is not filtered, and receives the crude sewage of Reading with its population of 79,000 and a number of other manufacturing and neighbouring towns. This is but a small river with insufficient water to purify by natural means the sewage with which it is contaminated. No wonder that Philadelphia possesses an unenviable reputation for the prevalence of typhoid fever. With its broad streets, its freedom from overcrowding and poverty, and, finally, with its very low marriage-rate and birth-rate, it should have an exceptionally small death-rate. Such, however, is not the case. The death-rate for the year 1903 amounted to 18·82 per 1000 and this is below the average for the last ten years—namely, 19·13 per 1000 of the population. The part that typhoid fever plays in this unfavourable state of affairs may be judged by the official statistics giving the figures as to the notifiable contagious diseases. These amounted last year to 3043 cases of diphtheria, an increase of 589 on the previous year; 4188 cases of scarlet fever, an increase of 1029 over the preceding year; 1637 cases of small-pox, an increase of 295 in comparison with the preceding year; and no less than 8701 cases of typhoid fever, or 3695 more cases than in 1902. In the year 1900 the

population of Philadelphia was set down at 1,293,700. It should also be noted that the 8701 cases of typhoid fever resulted in 957 deaths. This current year again there have been weeks, notably in the month of April, when as many as 300 new cases of typhoid fever were notified in the seven days.

Of course the question naturally arises as to what will be done and what has been done. It would fill a volume to describe all the plans, discussions, intrigues, and trouble that have surrounded this question. It must suffice to say that the hope of securing a pure water-supply has been abandoned, that Philadelphia will continue to be supplied with the water that receives all the sewage of the valley of the Schuylkill and the Delaware, and will trust for its safety to the possibilities of perfect filtration. But only a small portion of the filtering plant has been constructed and till its conclusion the temperance party will continue, with the aid of the law, to enforce the consumption of dilute sewage. At present a filtration plant is completed at Roxborough, so that a small district of Philadelphia receives filtered water, and another at Belmont is about to be completed. But the most important filters at Torresdale will not be in working order for about two years. These latter will supply 250,000,000 gallons out of the total, estimated at 342,000,000 gallons per day. At Torresdale there will be 55 separate filtration beds. Philadelphia will then have one of the most abundant water-supplies in the world, thus jumping from one to the other extreme, but this time it will be an exaggeration on the right side. Meanwhile the city remains a great centre for the study and the spread of typhoid fever. From such observations some curious facts have been elicited. At the City Bureau of Health no doubt is entertained as to the water-supply being the principal cause of the endemic and epidemic nature of typhoid fever in Philadelphia. Dr. A. C. Abbott, chief of the bureau, reports that the widespread outbreaks of typhoid fever in the city may "without doubt be attributed to the contaminated water." Not only is the Schuylkill contaminated above the water intake along its whole course but there is an accompanying canal from Reading to Philadelphia and both river and canal, says Dr. Abbott, "are regarded by persons and communities living and doing business along the banks as the natural receptacles for all manner of waste products and, except in the case of Reading where an ineffectual effort at sewage purification is made, a great mass of waste from human habitations, mills, factories, slaughter-houses, &c., is continually deposited into our principal drinking-water supply without the slightest restriction or effort at purification." The Philadelphia typhoid fever statistics for a period of 34 years ending with 1895 show that the customary increase in the number of cases of typhoid fever during the months of August, September, and October did occur in 18 out of the 34 years. During two years there was no increase in those months. For 15 years the rise in the number of cases at other times of the year was as high as, and even higher than, during the traditionally fatal months. During seven years the worst months were November and December, on 12 other occasions it was December and May. For four years the early spring was more fatal than the autumn. In 1903 the worst period was from January to March and from May to the beginning of June. The maximum for a single week was that ending Feb. 7th when 329 new cases had been reported in the seven days.

A little way outside the city and below the water intake there is a dam. During very dry weather no water passes over this dam. This means that nearly the entire flow of the river with all its filth is pumped into the reservoirs and used. It is at such times as these that the prevalence of typhoid fever greatly increases. Of course, when the rains are more abundant and there is so much water that a considerable proportion flows over the dam, then the dilution of the sewage which the river has received is much greater and the danger of contamination is lessened. The same argument applies to that portion of the water-supply derived from the Delaware river where there is much sewage pollution but a larger volume of water and more dilution, so that the results are not as bad. Thus in all the districts where the unfiltered Schuylkill water was supplied there were many more cases of typhoid fever than in those districts which received the equally contaminated but more diluted unfiltered waters of the Delaware river. On the other hand, the Roxborough district received Schuylkill water which had been filtered and it was here that the fewest number of cases occurred. It is but a small district and its inhabitants, of course, drink water from other sources when they are in other parts of the city; nevertheless, had the same immunity been enjoyed in the other parts of the city as in the Roxborough district there would have been last year 3328 less cases of typhoid fever. But the proportion would have been even more favourable were it not for the fact that a milk-supply in this district was contaminated and occasioned some cases. As soon as this was detected and the milk-supply stopped there were no further attacks of typhoid fever. Thus it seems to be demonstrated that even the filthy water of the Schuylkill can be efficiently filtered, and this should have been done from the first. All efforts to prevent drunkenness deserve unanimous support if they do not consist of intemperate exaggeration in the opposite direction. There are other and more deadly poisons than overdoses of alcohol and an overdose of sewage, as the experience acquired at Philadelphia clearly shows, is very deadly in its effects. Thousands of lives have been wasted at Philadelphia and many worthy citizens have been brought prematurely to the grave through impure water. Before any set of people take upon themselves to bring every form of pressure to bear to force a whole community to drink water they should first and foremost assure themselves of the purity of that water.

CHOLERA AND PLAGUE IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

THE cholera epidemic has greatly diminished since the date of my last letter[1] and is now almost extinct in Turkish territory. The following are the latest returns from Bagdad:—

			Cases.	Deaths.
From Sept. 25th	to Oct. 1st	...	33	39
,, Oct. 2nd	,, 8th	...	13	21
,, ,, 9th	,, 15th	...	5	6
,, ,, 16th	,, 23rd	...	3	4

The disease has apparently died out at Mendelli, Kiazmieh, Amara, and the other infected places on the lower reaches of the Tigris—that is to say, the figures last reported had sunk to units for each of these places and for some ten days or so no fresh news has been received from any of them. The only figures reported in the week ending Oct. 24th were, indeed, the three cases and four deaths at Bagdad mentioned in the above table. But caution is needed in accepting the absence of news as a proof that the disease has really disappeared and as late as Oct. 20th a reappearance of the disease at Suleimanieh was reported, though without any figures being mentioned. At Zor the epidemic apparently came to an end about Oct. 11th. At Nedjef from ten to 15 deaths were occurring daily about the middle of the month and though the cause was said to be unknown it is probable that this mortality was due to cholera. At Sharashé, near Kourna, at the junction of the Tigris and Euphrates, the disease showed renewed activity at the end of September, causing 13 deaths in a few days, but it has since apparently died out there also.

Uncertainty still prevails as to the course of the cholera epidemic in Persia. At Kermanshah 12 deaths occurred between Sept. 20th and 27th. At Teheran it was reported on Sept. 6th that no case of cholera had been observed for five days but a week later it was reported from the same source (the Ottoman Embassy at Teheran) that the disease had broken out again and was causing about ten deaths daily. The population, which had begun to return to the town, were again much alarmed. The same authority stated on the 6th that at Resht the cholera mortality was as high as 60 per day and on the 13th that at Resht and Enzeli it had risen to over 100 per day (apparently in each of these towns). No news has since been received from Teheran. On Oct. 11th it was reported that cholera had appeared at Sa'utch-Bulak, a place of some importance in the district south of Lake Urumiah (where, it may be recalled, is a centre of more or less endemic plague). Contradictory reports have been received from Tabriz; the latest, dated Sept. 30th, was a

[1] THE LANCET, Oct. 15th, p. 1099.

cryptic telegram, in reply to a request for information, to the effect that "owing to cold weather it (? the cholera outbreak) lasted but a short time." The statements in the English papers, reporting a mortality of from 300 to 400 deaths daily in Tabriz, have not been confirmed here.

In the Russian province of Transcaspia cholera is apparently declining. The following figures are from Russian official sources: from August 28th to Sept. 4th, 62 cases and 43 deaths; to Sept. 11th, 77 cases and 48 deaths; to the 18th, 22 cases and 12 deaths; to the 25th, 22 cases and 11 deaths; and from Sept. 25th to Oct. 2nd, 11 cases and 3 deaths. These cases and deaths have occurred in the towns of Merv, Askhabad, Hassankuli, Tedjend, Kaachka, Tchikishliar, and Bairam-Ali. In addition to the figures quoted, nine cases and five deaths occurred in the Jaffan-bey steppe, south of the Transcaspian province, between Sept. 25th and Oct. 2nd.

From Baku the following figures have been received:—

	Cases.	Deaths.
From Sept. 24th to Sept. 26th ...	41	29
On ,, 27th	27	13
From ,, 28th to Oct. 1st ...	55	33
,, Oct. 2nd ,, 5th ...	67	36
,, ,, 6th ,, 9th ...	38	27
,, ,, 10th ,, 12th ...	29	10
,, ,, 13th ,, 17th ...	43	19
,, ,, 18th ,, 20th ...	9	6

In Saratof, on the Volga, nine cases and three deaths occurred between Sept. 19th and 27th and 13 cases and five deaths between the latter date and Oct. 4th. No official news has been received here of the appearance of cholera in any other places in Russia than in those mentioned.

Very little is known as to the behaviour of cholera in the Nejd province of Arabia and on the shores of the Persian Gulf. Muscat has been free from the disease, at least since Sept. 22nd. Katif, on the Arabian shores of the Gulf, has been free since August. A report from Katar, on the same shores, addressed to the Vali of Basra and dated August 30th, stated that cholera had reappeared there, in the Sudan and Remla quarters of the place, and had caused 40 deaths in ten days.

A sixth case, presenting the clinical symptoms of plague, though not proved bacteriologically to be that disease, occurred in Smyrna last week. The patient, a Moslem, aged 40 years, was first seen on Oct. 14th. He had then been ill for eight days. He has since recovered.

Constantinople, Oct. 26th.

PS.—Since writing the above telegrams from Bagdad have been received reporting a considerable mortality from cholera at Bedra and Zorbatia, both close to the Persian frontier. The same telegrams state that the mortality at Nedjef above alluded to was not due to cholera but to the miserable condition of the pilgrims with which the city is overcrowded.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Appointment for Professor B. C. A. Windle.

THE appointment of Professor Windle to the presidency of Queen's College, Cork, which you announce in your issue of Oct. 29th, severs a connexion with Birmingham which has now extended over 22 years. Professor Windle first came to the city in 1882 as pathologist to the General Hospital and occupied that position for about 18 months. He was then appointed resident medical officer but resigned that post in three months, having been elected professor of anatomy in the Queen's College, Birmingham, where the medical school then was. His appointment was the first of the kind, for up to that date the chair had been filled by medical men who devoted most of their time to their practices. A year or two after this Professor Windle was elected to the position of honorary secretary to the council and in 1891 the post of dean of the medical faculty, which had been in abeyance since the death of William Sands Cox, F.R.S., the founder of the school and its first dean, was revived in his favour and has been occupied by him ever since. His appointment as dean was signalised by a movement, which was eventually successful, for removing the medical faculty from Queen's College, which it shared with a faculty of Church of England theology, and placing it in a more harmonious conjunction with the faculties of science and arts, which carried on their work in what was then the Mason Science College. On the accomplishment of this scheme Professor Windle became the first dean and professor of anatomy in the newly constituted school. When the charter creating the University of Birmingham was granted Professor Windle's name appeared therein as first dean of the medical faculty in the new institution. Professor Windle was educated at Trinity College, Dublin, and holds the degrees of M.D., Sc.D., and M.A. He is also F.R.S. and F.S.A. He has taken part in public work to a considerable extent, having been a member of the Birmingham School Board and being at the present time a member of the education committee of that city, of whose higher education subcommittee he was the first chairman. He was also for some time a member of the committee of the School of Art and Museum and for four years occupied the chair of the committee of the Birmingham library, over whose destinies he presided during the period that that ancient institution was being removed from its old to its present home. Professor Windle is an Irishman and a Roman Catholic and not only represented his co-religionists on the local education authority but also on the consultative committee to the Board of Education, of which he was one of the first group of members, and on the Teachers' Registration Council, of which he was also an original member. He represents the University upon the General Medical Council and is chairman of the Education Committee of that body. Professor Windle holds the joint chair of anatomy and anthropology in the University and is the author of a number of works and papers dealing with the latter subject. He is also professor of anatomy to the Royal Birmingham Society of Artists and was for a number of years lecturer on anatomy at the Municipal School of Art.

Orthopædic Hospital.

The Marquis of Hertford presided over the annual meeting of the friends and supporters of this institution which has recently been held. The report sounded the same note as that sounded by so many similar institutions this year, for it lamented that there was a deficiency in the accounts. In the previous year this had amounted to £643 but this had been reduced to some extent by a special donation of £300. The deficiency for the last year amounted to £464. The attention of the public had been called during the year by a letter in the daily press—of which the committee had no fore knowledge—to the unsatisfactory character of the present hospital and it was hoped that something might shortly be accomplished in the direction of providing better buildings which were so very badly needed. Much regret was expressed at the resignation of the post of honorary treasurer, which he had held for 25 years, by Mr. Courtenay Lord. The medical report showed that the number of attendances during the year was 7275 as compared to 8318 in 1903. The diminution was unfortunately due to the occurrence of infectious disease in the hospital which necessitated the closing of the wards. At present the institution had no means of isolating suspicious cases, and this as well as other matters called for immediate attention. The chairman in his remarks brought to notice the number of undeserving cases which went to the hospital and suggested that this might be checked by making a charge of 6*d*. for every out-patient and of 1*s*. per week for every in-patient, a suggestion which I do not think is likely to commend itself to the general practitioners of the city and district.

Dental Hospital.

This institution, to the claims of which I have directed attention in former communications is making vigorous efforts to raise the sum of money which is required for the rebuilding of a hospital which at the present moment is little other than a disgrace to the city. It is somewhat unfortunate that this institution, the only one of the kind in the midlands, should have always failed to secure the right kind of interest and support. So far as the medical profession is concerned, the fact that the chairman of the committee is the most notorious antivaccinationist and antivivisectionist in the district probably explains why they have not looked upon the hospital with any very warm feelings of affection.

Antivivisectionists and the University of Birmingham.

A petition has been sent to the council of the University and also to the city council praying that vivisection may

be done away with in the chief seat of learning in the city. So far the answers to this petition have not been made public. A debate on the subject has recently been held by the members of the Birmingham and Edgbaston Debating Society, an old and famous organisation where Mr. Chamberlain and other well-known orators originally learnt their trade. Lieutenant-General Phelps proposed the motion, which was that vivisection should be abolished and prohibited by law. The chief speaker on the negative side was Dr. S. Herbert Perry and amongst other members of our profession who took part in the debate were Dr. J. D. Stanley, Mr. Leonard Gamgee, and Mr. Albert Lucas. On a vote of members only being taken it was found that for the motion there were three and against 31. A vote of members and visitors was then, as usual, taken when it appeared that 44 had voted for the motion and 49 against. A number of meetings have been held by the Antivivisectionist Society in different parts of the city but the well-worn statements made seem to have excited no particular interest.

Coventry Working Men and the Hospital.

At a meeting of the committee of Coventry Hospital which has recently been held the sums raised during the year by the Working Men's Hospital Saturday Committee, the Cycle Motor Parade, and Herbert's Athletic Club were paid to the treasurer. The sum handed over on behalf of the first named of these bodies was £1775, a record sum and one £50 in excess of that subscribed during the previous year. The committee thought that, considering the state of trade, this result was most encouraging and pointed with some pride to the fact that during the 31 years which had elapsed since this fund had first been started the amount realised for the hospital had been £28,857. A cheque for £40, being part of the proceeds of the recent cycle and motor carnival in the city, and another cheque for £65 from Herbert's Athletic Club and Institute as the result of their sports were also handed over to the treasurer.

Nov. 1st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Infirmary for Children: Laying the Foundation-stone of the New Building.

THE Lady Mayoress of Liverpool performed the ceremony on Oct. 28th of laying the foundation-stone of the new Infirmary for Children. The chair was occupied by Colonel C. Forbes Bell (the president) who was supported by the Lord Bishop of the diocese, the Rev. John Watson (Ian Maclaren), the city coroner, and a representative gathering of the citizens. The old building had become obsolete and its insanitary condition had been a source of much anxiety to the committee and medical staff owing to the frequent outbreaks of diphtheria, scarlet fever, &c. After much anxious deliberation it was decided to pull down the building and to build a new hospital. The main structure will occupy the site of the old infirmary at the corner of Myrtle-street and Mulberry-street. Originally the whole suite of buildings of the hospital was crowded on to one site. Two years ago, however, land was acquired on the east side of Mulberry-street opposite the old infirmary and a separate building was erected for the out-patient work of the hospital, a description of which appeared in THE LANCET of Jan. 31st, 1903, p. 335. When the question of demolishing the old infirmary and building a new one was under consideration the idea was conceived of making the nurses' home and laundry separate and isolated from the main pile. Accordingly, land was bought on the east side of Mulberry-street, adjacent to the new out-patient department, and on this land it is proposed to erect the nurses' home and laundry, which will be connected with the principal block of the infirmary by a subway running under and across Mulberry-street. In the new hospital there will be accommodation for 100 cots in five wards, three of which will be for medical and two for surgical cases. The ward pavilions are planned to recess and radiate to a centre, to which will be joined a department to be utilised for facilitating supervision and observation. The triangle formed by this recessing and radiating of the ward pavilions will front to Myrtle-street, which is a south view, and an opportunity will be thus afforded for placing in a position of continuous sunlight and sun-warmth the balconies on which the children's cots can be wheeled on fine days. This arrangement of the ward pavilions has also the advantage of enabling the building site to be open on all sides. Accommodation will be provided for three resident medical officers and a matron. Provision is also to be made for a small "observation" block where doubtful cases can be treated until their character has been duly ascertained. In this section there will be three wards, each capable of accommodating two cots, with separate bedrooms for the nurses, so that they can be quarantined if necessity requires. The kitchens and larders, as is now the case in most new buildings of this character, are arranged on the top floor, to which access will be obtained by an electric lift. In connexion with each ward there will be a clinical room. There will also be a pathological room, an operating theatre, sterilising and anæsthetic rooms, a photographic studio, and an x-ray room.

Bequest to the University of Liverpool: Natural Science Scholarships.

Under the terms of the will of the late Dr. Isaac Roberts, F.R.S. (formerly of Liverpool and lately of Starfield, Crowborough), the astronomer, and the inventor of a machine for measuring the magnitudes and positions of the stars, the University of Liverpool receives a bequest that will ultimately be one of considerable value. The executors are directed to realise the estate, which is valued at £45,000, and after payment of certain legacies to invest the proceeds so as to provide annuities for the testator's widow and other persons. As annuities cease the residue of the income is to be divided equally between the University of Liverpool and the two University Colleges of North and South Wales, and upon the death of the survivor of the annuitants the capital of the trust is to be shared in the same way. In each of the three institutions two scholarships, each of the yearly value of £50, are to be established for the encouragement and assistance of students of the natural sciences, whether graduates or undergraduates, preference being given to students of astronomy, biology, chemistry, electricity, geology, physics, and zoology. The period and the conditions of tenure are to be determined by the respective councils which are also empowered to apply the surplus income for any purposes authorised by their charter. As the share of each institution may amount to £12,000 or more the residue, after providing for the scholarships, will be considerable. The bequest is of exceptional interest as coming from one who was a distinguished citizen of Liverpool and who owed his scientific eminence to efforts almost unaided, for Dr. Roberts's early education did not go beyond the elementary school. He was apprenticed at the age of 14 years but while working for long hours still found time to lay the foundations of his broad scientific knowledge in the classes of the Mechanics' Institute. There was hardly a science he did not touch, though he won special distinction in astronomy. In that field of study his mechanical ingenuity enabled him to do work within the reach of few—witness such instruments as the "stellar pantograver" for engraving directly upon copper plates the stars shown on glass negatives and his various improvements in the methods of stellar photography.

Hospital Sunday Fund: Annual Report: Welsh Generosity.

The treasurer of the Liverpool Hospital Sunday Fund has received from the honorary secretary of the Hospital Sunday Welsh committee a contribution of £100 from North Wales to the 1904 collection.—In the annual report issued yesterday it will be seen that the amounts distributed to 19 medical charities were £14,850, being made up by contributions from the Hospital Sunday Fund of £6481 18*s.* and from the Hospital Saturday Fund of £8368 2*s.* The expenses incurred in the working of the two funds were £226 10*s.* 11*d.* There is a balance in the bank of £87 5*s.* 11*d.*

The University of London: Appointment of Examiner in Medicine.

The appointment of Dr. T. R. Bradshaw, physician to the Liverpool Royal Infirmary and lecturer on clinical medicine at the University of Liverpool, to the examinership in medicine at the University of London, in succession to Sir Isambard Owen, has given much satisfaction to the students attending the clinic of the Royal Infirmary and other medical friends in Liverpool. Dr. Bradshaw was the first to bring under the notice of the profession in this country the disease to which he gave the name of

"myelopathic albumosuria," by which nomenclature it is commonly known in the British dominions and in the United States.

Nov. 1st.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

British Medical Association: Worcestershire and Herefordshire Branch.

Dr. J. B. Fitzsimons presided over the autumn meeting of the Worcestershire and Herefordshire branch of the British Medical Association which was held at the Worcester Infirmary on Oct. 28th. A paper was read by Dr. Mabyn Read, the medical officer of health of Worcester, on Some Difficulties in the Management of Small Isolation Hospitals. The principal difficulties brought under discussion related to the admission of scarlet fever patients in whose throats Klebs-Löffler bacilli were found, to the admission of patients suffering from one disease but who had been in contact with persons ill of some other infectious disease, to the admission of doubtful cases, and to the precise time at which a patient should be discharged from hospital. The public health laboratory established by the Worcester county council appears to have been of incalculable assistance to Dr. Read who, as a matter of routine, examines the throat for the diphtheria bacillus in the case of every scarlet fever patient admitted to the Worcester hospital. During a given period out of 85 patients so examined the Klebs-Löffler bacillus was found in six instances and Hoffmann's bacillus in 28. Dr. Read urged upon medical practitioners the desirability of placing a suitable indication on the notification certificate relating to a doubtful case rather than either delaying to notify until the doubt had been cleared up or running the risk of placing the patient among those who are infected with a disease from which he is only suspected of suffering.

Additional Accommodation at the Gloucester County Asylum.

At a meeting of the Gloucestershire county council held on Oct. 24th it was decided to make arrangements for the erection of two new blocks at the county asylum. This step has been taken not because the institution is at present overcrowded but because at the end of two years the existing accommodation will be insufficient for the Gloucestershire patients, provided the number of lunatics increases at the same rate as in former years. The existing accommodation is for 507 males and 595 females and there are now in the asylum 1021 patients belonging to the county and 56 from Cardiff. It is possible that the latter will be removed within the next few years to the asylum now being erected by the Cardiff corporation.

Sir William S. Church at Bristol.

The prizes gained by the medical students at University College, Bristol, were distributed on Oct. 28th by Sir W. S. Church who in the course of an address to the students reminded them that they must not look for wealth as the reward for their labours but rather the advancement of knowledge, the assisting of the science and practice of their art, and usefulness to their fellow men. He spoke in terms of condemnation of the so-called practical man who was too idle to study and who did his work by rule of thumb and who was very nearly allied to a quack.

University College, Aberystwith.

At the opening of the session there were 467 students in residence at University College, Aberystwith, or 15 more than last year. Of women students there are 242. For the agricultural section of the college a farm of 180 acres has been taken. The finances of the college are not in a very satisfactory condition and an appeal is to be made to the Chancellor of the Exchequer for an increase in the treasury grant. The session was opened on Oct. 26th by an address from Sir John Williams.

The Appointment of Medical Officer of Health for Salisbury.

At a meeting of the Salisbury town council, held on Oct. 25th, it was decided to communicate with the surrounding authorities with a view in the future of appointing for Salisbury and the surrounding district a medical officer of health who would devote the whole of his time to the work.

Oct. 31st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Milne Murray Lodge.

A STUDENTS' residence at the Royal Edinburgh Maternity and Simpson Memorial Hospital, which was established some months ago by the Town and Gown Association working in conjunction with the directors of the hospital, was formally opened on Oct. 28th in the presence of a numerous and representative gathering of the medical profession. It has for some time been apparent that the facilities for training students in practical midwifery have not been altogether satisfactory and a number were obliged to go to Dublin or Manchester in order readily to obtain the necessary cases for purposes of qualification. The late Dr. Milne Murray—whose premature death at the beginning of the year came as a severe blow to the profession—was fully conscious of this defect in the equipment of the Edinburgh Medical School and suggested the lines upon which a remedy might be found. Hence the present institution forms a fitting memorial to one who did so much to advance the scientific and practical aspects of obstetrics in Edinburgh. The lodge is situated in Lauriston Park, immediately behind the Maternity Hospital, and is in direct communication with the latter by means of a covered passage. Every month 12 students can go into residence and during that period all the extern practice of the hospital is at their disposal. In addition to this they can be summoned at any time to the wards to witness cases of difficult or abnormal labour and they attend a course of clinical lectures given by the physicians and assistant physicians. The fee for the month, which includes the practical teaching and the cost of board and residence, amounts to about ten guineas. Professor A. R. Simpson, in declaring the lodge open, said that it had been long recognised throughout the world that the systematic teaching in Edinburgh held a high place and it seemed to him that the Maternity Hospital was the step-child of all the institutions in Edinburgh. The present addition to the hospital had been made in order to give students further opportunities of obtaining the necessary training to make them proficient in the practical work of midwifery. He hoped that the institution would continue to be well supported. The lodge, which is most attractively furnished, is conducted by Mrs. Milne Murray, and this of itself is a guarantee for the success of the undertaking. Those students who have already been in residence speak in the highest terms of the comfort and harmonious working of the lodge under her management.

Nov. 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Academy of Medicine in Ireland.

THE first meeting of the Royal Academy of Medicine for the session took place at the Royal College of Surgeons in Ireland on Oct. 28th. The Section of Pathology met and received many interesting and important communications.

Royal College of Physicians of Ireland.

At the annual meeting of the Royal College of Physicians of Ireland held on Oct. 18th Dr. W. J. Smyly was elected President for the coming year and Mr. E. E. Lennon vice-president.

The Difficulties of Public Health Administration.

A man was arrested at Carrick-on-Shannon on Oct. 29th for threatening to assault Mr. Patrick Stephenson, public health medical officer of the district. The insanitary condition of the man's premises had been reported upon on more than one occasion.

The Incorporated Belfast Maternity Hospital.

Among the very oldest of the many deserving charities of Belfast is the Maternity Hospital. In the year 1793 it was founded as "The Lying-in Hospital" and under this name in its place in Clifton-street it did very valuable work up to 1901, when it was decided that the hospital should be rebuilt. A very eligible site of 98 feet frontage along the east side of Townsend-street and with an extension backwards of 183 feet was purchased. The entire site is now

occupied by the new building which is planned in the shape of the letter T—an arrangement which insures both light and air round every side. The hospital, which is placed in a working-class district, has three floors, the ground floor being occupied by the kitchen, the committee room, a lecture room, apartments for various officials, and at the extreme end of the building the extern department. The first or middle floor is solely devoted to the accommodation of patients and contains the couch room and near it the observation ward and a room beside it for the use of the nurse on duty for this ward. There are also four wards, each containing four beds (the greatest number allowed in one ward for this special kind of hospital), and some smaller wards, containing one and two beds each, for separate cases or for paying patients—that is, a total of 23 beds. The lavatories, bath-rooms, &c., are contained in a sanitary tower as an annexe, separated from the main building by a disconnecting passage. The third or top floor is, with the exception of one ward with four beds, entirely occupied by the sleeping apartments of the staff, the larger rooms being subdivided by cubicles. The laundry has been placed at the end of the yard and is in no way connected with the main building and it is being fitted with modern laundry appliances. The yard also contains a disinfector. Owing to the floor level being kept well over the surface of the ground a basement passage has been formed under the corridors in which all the water, gas, and electric mains are carried and are easily accessible in case of anything requiring attention. A new form of flooring introduced from Germany where it took its origin has been adopted. It is called euboeolith or xylolithite and is a concrete composed of sawdust wrought to a smooth surface and waxed, with a result that all joints are banished as well as the cold, hard feeling of the marble concrete, while it admits of cleaning in all the ordinary methods without any injury to the material. This mixture can be brought to any colour and a shade resembling ordinary pine stain has been selected for the hospital. At the junctions of the floor and walls it is rounded. This flooring costs less than wood or terrazzo. The couch or delivery room is a very fine well-lighted apartment, 22 feet by 16 feet and 13 feet high. The floor is euboeolith; the walls are in part lined with smooth tiles, above which they are covered with Keen's cement. In the washbasins the pedal taps (which so rarely keep in order) have been replaced by a revolving tap which can be worked by the elbow and from which cold or warm water can be procured. The building is lighted with electric light. The architect was Mr. W. J. Fennell, M.B.I.A., who acted in a similar capacity for the Mater Infirmorum Hospital, and the builders were the same as for the Royal Victoria Hospital, Belfast, Messrs. M'Laughlin and Harvey. Mr. Herbert Ewart, the chairman of the board of governors and of the building committee, has given much time, care, and consideration to every part of the building. Indeed, without his unwearied efforts this new hospital, which will be of such benefit to the poor and of such assistance to the Belfast Medical School, would never have existed. It is to be opened formally on Nov. 7th by the Countess Grosvenor, wife of Mr. Wyndham, Chief Secretary for Ireland, when it is hoped that the building committee will have the pleasure of announcing that the cost of the construction and furnishing of the hospital has been defrayed.

Congestion in Belfast Workhouse.

A special committee appointed to look into the question of the congestion of the Belfast workhouse advises that all the lunacy cases should be removed from the workhouse to the asylum, that the Belfast corporation should hasten the completion of the fever hospital so that such cases in the workhouse could be removed there, and that the children's infirmary should be razed to the ground and rebuilt. This report was submitted to a meeting of the Belfast guardians on Oct. 25th and Colonel M'Cance kindly offered to provide temporary accommodation for the children at Glencoe, near Antrim, a generous gift which was accepted.

Small-pox in Belfast.

During the past ten days a serious recrudescence has taken place in the epidemic of small-pox which has so long been baffling the efforts of the authorities in Belfast. 11 new cases have been admitted to Purdysburn hospital and what is really alarming is the fact that patients with the disease have been sent to the Purdysburn isolation hospital, not from one district, but from all parts of the city, and some of them have been of a very bad type. Either the disease is in many places, especially if mild, being hidden or re-vaccination is not being done.

The New Infectious Diseases Hospital, Belfast.

The new infectious diseases hospital, the inception of which was so long delayed in Belfast, is, I am glad to say, nearing completion. It is situated on the western side of the Purdysburn estate, a property near the city purchased by the Belfast corporation, in the midst of about 50 acres, almost entirely surrounded by plantation and remote from any dwellings. It is designed upon the isolation or pavilion plan recommended by the late Sir Richard Thorne and consists of an administrative block and a number of isolated pavilions arranged on parallel lines, each devoted to a particular disease and with male and female wards. In addition there is an isolation block where patients whose disease has not decisively declared itself will be placed for diagnosis. A laundry with elaborate disinfecting apparatus, nurses' apartments, and stables and horses for the ambulance cars are all provided. The buildings will be so inclosed that no one can come within 50 feet of them without permission. Under the Public Health Act every town is compelled to provide hospital accommodation for infectious disease to the extent of one bed for every 1000 inhabitants, so that in Belfast, with an estimated population of 358,680, 370 or 380 beds will be needed in this new infectious diseases hospital.

Oct. 31st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Water-supplies for Garrisons.

AT a meeting of the Academy of Medicine held on Oct. 11th M. Gariel read the reply which had been prepared by a committee in answer to an inquiry made by the Minister of War and transmitted by the Minister of Public Instruction. The Minister of War inquired whether it would be necessary for his department to appoint a special committee to investigate the methods of collection (*captage*) and conveyance of water for consumption by the troops in the various garrisons. The committee of the Academy did not think that the proposed War Office committee was required, because in every town there were boards and committees of health created for the purpose of dealing with such matters. As these committees always include one or more military members they are quite competent to undertake duties which would devolve on the proposed committee and the latter would therefore seem to be unnecessary.

Tuberculosis in the Dairy Cattle of Paris.

In the report of the work of the sanitary service of Paris and the department of the Seine during 1903 it is stated that bovine tuberculosis exists in all the arrondissements of Paris except the first four, and that 59 suburban communes are infected. The department of the Seine has 195 infected cowhouses and 213 tuberculous animals. As regards degree of infection the condition of the cowhouses of Paris and of the Seine appears to be stationary, having varied between 15 and 17·6 per cent. during the period 1896–1903. In reality it is difficult to estimate the extent of the mischief, but it is well known that many cowhouses which are infected with tuberculosis are not interfered with by the sanitary service. The cowhouses which are recognised to be infected are those from which one or more animals have been taken to the slaughter house. It is quite exceptional for tuberculosis to be diagnosed in the living animal; only four such cases occurred in 1903, and in them the discovery was made when cattle which had been recently sold were tested with tuberculin. Only one case was diagnosed by the tuberculin test applied with the consent and on the initiative of the owner of a cow; in this particular instance the owner was a medical man. In another case the disease was supposed to be pneumonia but at the necropsy it was found to be tuberculosis. The prevalence of the disease in the cowhouses of the department of the Seine is due not so much to the local spread of contagion as to the fact that the animals newly arriving each year come from seriously infected districts. It is known that the Norman, Flemish, and Dutch cows brought into Paris and the suburbs are often diseased. Tuberculosis and pneumonia act alike in this respect. Whenever tuberculosis disappears from the

countries or districts where the dairy cattle are reared the Paris cowhouses will be free from the disease. In order to determine the relative frequency of tuberculosis in the cowhouses declared to be infected the percentage must be calculated not on the aggregate of all the cows—about 23,000—but on the number of cows in the dairies actually found to be infected. The proportion calculated in this way is 213 in 3187, or 6·68 per cent.

A Death under Chloroform.

The Versailles police-court has commenced the investigation of a difficult case in which a child died whilst being anæsthetised by chloroform prior to the performance of an operation. The child was three years of age and unconsciousness had only just been induced when it was found to be dead. The police commissary arrived in a few minutes and took possession of two bottles of chloroform, the prescription of the medical men, and some other articles. A necropsy was then made. The report of the medical experts has not yet been submitted but the magistrate has authorised the interment of the remains. A chemical expert has been directed to analyse the chloroform employed.

Death of Professor Tillaux.

French surgery has just sustained a great loss by the death of Professor Tillaux who passed away on Oct. 20th, in his seventieth year. A native of Calvados, he commenced medical study at Caen, where he simultaneously held the appointments of house surgeon (interne) at the Hôtel Dieu of Caen and prosector in the pathological department. Then he proceeded to Paris where he became interne at the age of 23 years. Four years later he was appointed prosector and devoted himself specially to surgical work. He became *agrégé* in 1866, his *thèse d'agrégation* being on the surgical affections of nerves. In 1868 he lectured on anatomy and operative surgery in the hospitals at Clamart. In 1876 he published a book entitled "Experimental and Clinical Researches on the Mechanism of the Production of the Backward Dislocation of the Hip-joint," and in 1878 he was appointed surgeon to the Hôpital Beaujon. The same year he received the decoration of the Legion of Honour and in the following year was admitted a member of the Academy of Medicine. His treatise on topographical anatomy applied to surgery appeared in 1884 and had considerable success. In 1886 he became surgeon to the Hôtel Dieu and commenced a second work, "A Treatise on Clinical Surgery," which he completed in 1889. In 1890 he was appointed to the chair of Surgical Pathology. In 1892 he was promoted to be Officer of the Legion of Honour and at subsequent periods to be Commander and Grand Officer. He ultimately for some years occupied the chair of clinical surgery. He was an honorary Fellow of the Royal College of Surgeons of England. He was President of the Academy of Medicine from the beginning of the present year and was in the chair at almost all the meetings up to July. He was a good man and an accomplished surgeon.

Nov. 1st.

Medical News.

UNIVERSITY OF OXFORD.—In a Congregation held on Oct. 20th the following degrees were conferred:—

Master in Surgery (M.Ch.).—Paul Norman Blake Odgers, Lincoln College.

Bachelor of Medicine and Surgery (B.M., B.Ch.).—Allan Read Wilson, Wadham College.

The examinations for the degree of Bachelor of Medicine (first B.M. and second B.M. examinations) will commence on Thursday, Dec. 8th, at 9.30 A.M. Names of candidates entered on the forms issued for the purpose and accompanied in each case by the required certificates and fees must reach the secretary to the Boards of Faculties (Clarendon Building, Broad-street, Oxford) not later than 10.30 A.M. on Wednesday, Nov. 23rd.—Reginald Cecil Bligh Wall, D.M., Queen's College, M.R.C.P. Lond., physician to the Poplar Hospital and medical tutor in the London Hospital, has been appointed an assistant physician at the London Hospital.

UNIVERSITY OF CAMBRIDGE.—Mr. R. H. Lock, B.A., late Frank Smart student in botany, has been elected a Drosier Fellow of Gonville and Caius College.—Dr. A. C. Haddon, F.R.S., University Lecturer in Ethnology, has been elected a Senior Fellow of Christ's College.—At the Congregation on Oct. 27th the following degrees were conferred:—

Bachelor of Medicine.—G. R. Rickett, King's; R. E. Whitting King's; R. H. Robbins, Trinity; R. G. Nothwanger, St. John's and W. B. Swete-Evans, Clare.

Bachelor of Surgery.—R. G. Nothwanger, St. John's.

The State Medicine Syndicate reports that during the current year 57 candidates presented themselves for examination in sanitary science and 34 received the diploma in public health. For the examination in tropical medicine and hygiene 12 candidates presented themselves and eight received the diploma. The syndicate has arranged to hold two examinations in tropical medicine in 1905, one beginning on Jan. 10th, the other on August 8th. Applications are to be sent to Dr. G. H. F. Nuttall, F.R.S., Pathological Laboratories, Cambridge.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.—The following candidates have passed the examinations indicated:—

First Professional Examination.—All subjects: James J. Barry and A. H. T. Warnock. *Completing:* Stephen J. Barry, J. Brereton-Barry, Thomas G. Brown, Noel M. Herbert, L. C. Johnston, H. G. M. Miles, K. A. P. R. Murray, Joseph McDonagh, D. S. MacDowell, Pierce Nooman, Martin C. O'Hara, Richard P. Power, F. Blood Smyth, and Bernard Wallace.

Second Professional Examination.—With Honours: John Molyneux, J. F. Walsh, John McNamara, Patrick J. McKevett, and Charles J. B. Dunlop. *All subjects:* H. C. Burbidge, M. Beauchamp Dooley, R. de S. B. Herrick, A. A. Murphy, and Patrick J. Murray. *Completing:* William Carroll, A. L. Clarke, James Joseph Clarke, James J. Corr, George A. Francis, S. A. Furlong, John Holmes, J. P. O'Kane, W. Roche O'Farrell, William A. Ryan, James V. Sage, G. B. Spencer, and L. D. Woods.

THE FAIRCHILD SCHOLARSHIP AND PRIZES FOR STUDENTS OF PHARMACY IN GREAT BRITAIN AND IRELAND.—This scholarship has been founded by Messrs. Fairchild Brothers and Foster of New York in appreciation of the friendly relations which for many years have subsisted between them and pharmacists of the United Kingdom. It is open to any apprentice or assistant of either sex preparing to qualify under the Pharmacy Act, 1868, or the Pharmacy Act (Ireland), 1875. It is proposed to award one scholarship to the value of £50 annually as the result of examinations conducted in England (London and Manchester), Ireland (Dublin), Scotland (Edinburgh), and Wales (Cardiff). In addition to the annual scholarship of £50 it is proposed to award as consolation prizes £5 to each of the best candidates entering in England, Ireland, Scotland, and Wales. The nationality of a candidate will be determined by reference to the place at which he or she was living when registered as a student of pharmacy by the registrar of the Pharmaceutical Society of Great Britain or of Ireland and irrespectively of the centre in which he presents himself for examination under this scheme. The subjects of examination will be elementary chemistry, elementary materia medica, practical pharmacy, prescription reading, and elementary business knowledge. The examinations will be held at the five centres named during the month of July, so that the successful candidate may be able to commence his studies during the ensuing winter session. Candidates who intend to compete at this examination will be required to give notice in writing not later than June 1st, 1905, to the secretary. The successful candidate shall be at liberty to select any well-known school or college of pharmacy in Great Britain or Ireland where he proposes to study for the qualifying examination during a period of not less that three months within a year from June 1st, 1905. All communications in regard to the Fairchild scholarship and prizes should be addressed to Mr. A. E. Holden, Bath House, 59, Holborn Viaduct, London, E.C., secretary to the committee of trustees. No candidate will be admitted for the examination in 1905 who has not completed 20 years of age or who exceeds 22 years of age on Jan. 1st, 1905. Applications must in each case be accompanied by a certificate of birth. In Great Britain no candidate will be admitted who has not been registered as a student of pharmacy by the registrar under the Pharmacy Act, 1868, and who at the time of application has not completed three years' service in dispensing physicians' prescriptions as required by the Pharmaceutical Society for all who enter for the minor examination. In Ireland no candidate will be admitted who has not been registered as a student of pharmacy by the registrar under

the Pharmacy Act (Ireland), 1875, and who has not completed the four years' apprenticeship required before entering the Licence examination of the Pharmaceutical Society of Ireland.

THE LATE PROFESSOR FINSEN.—The Danish legislature has voted a pension of 3600 kronen (about £200) to the widow of the late Professor Finsen.

RED CROSS HOSPITAL AT IRKUTSK.—Dr. Walter Petersen, extraordinary professor of surgery in Heidelberg, has been appointed chief medical officer of the Red Cross Committee's Hospital which is about to be established at Irkutsk.

LITERARY INTELLIGENCE.—Messrs. W. Heffer and Sons, Cambridge, have in the press a book by Mr. S. W. Cole, M.A., of Trinity College, Cambridge, entitled "Exercises in Practical Physiological Chemistry." The book, which is written for the use of medical students, is essentially a laboratory book, only those exercises being included which the author has found can be carried through in ordinary class work. At the same time the ground covered is considerable, including many new experiments illustrating the results of recent research. A special feature of the book is a series of notes following the exercises indicating the modifications of the reactions and the precautions necessary to obtain success under various conditions and giving brief explanations of the results obtained.—Mr. Henry J. Glaisher of Wigmore-street, London, W., will shortly publish "X Rays: their Treatment in Cancer and other Diseases," by Mr. R. J. Cowen, L.R.C.P. & S. Irel., &c.—Messrs. Sampson Low, Marston, and Co. are reissuing "The Manual of First Aid," by J. A. Austin, M.D., lecturer to the St. John Ambulance Association. The new edition is in stiff paper boards, at 1*s*. They also have in preparation a new edition of Dr. J. Arthur Gibson's work on "The Nordrach Treatment for Consumptives in this Country." The author describes the Nordrach system from personal experience, having been a consumptive patient at Nordrach whence he returned cured.

UNIVERSITY OF LONDON: FACULTY OF MEDICINE.—A meeting of the Faculty of Medicine was held in the Jehangir Hall of the University Buildings, South Kensington, on Nov. 1st. Mr. H. T. Butlin, the Dean of the Faculty, presided, and 76 members of the Faculty attended the meeting. The Dean announced the termination of his period of office, pointing out that in accordance with what he believed to be a desirable regulation he was after four years' service incligible for reappointment. In reviewing the work of the Faculty during the first four years of its existence Mr. Butlin drew attention to the variety and importance of the questions which had been dealt with and expressed satisfaction that the various recommendations of the Faculty had been favourably received by the Senate. For his own part he believed that it was only by the success of this movement for establishing a central institute that the very unsatisfactory financial position of medical education in London could be effectively dealt with. He rejoiced that one of the results of the establishment of a Faculty of Medicine had been to lessen the jealousies and enmities between the great schools of medicine in London and bring home to the several teachers of these institutions the importance of each working for the good of all. The future of London as a centre of medical education was inseparably bound up in the success of the University and the Faculty might look back upon its past four years' work with satisfaction as an indication that the medical department of the University was determined to take full advantage of the reorganisation of its constitution. Dr. J. Rose Bradford proposed that a vote of thanks be given to Mr. Butlin for his services as Dean of the Faculty during the past four years. He spoke in the highest terms of the manner in which Mr. Butlin had presided over the meetings of the Faculty. But this work as chairman was a very small part of Mr. Butlin's services. He had thrown himself with great energy into all matters which he conceived would be of advantage to medical education in London, especially into the movement for the foundation of the Institute of Medical Sciences. The entertainment of the French physicians during their visit to London had promoted the *entente cordiale* between the nations and added to the honour of the University and the dignity of the office of Dean of the Faculty. Dr. W. Hale White, in seconding the motion, which was carried with acclamation, stated that Mr. Butlin had, as the first Dean of the Faculty, created a tradition for the office which could not fail to be of value to the medical faculty whatever years and honours might be in store for their University. Subsequently Dr. James King-ton Fowler was elected Dean and Mr. A. Pearce Gould Vice-Dean of the Faculty and Dr. Lauriston E. Shaw was reappointed honorary secretary.

THE SANITARY INSPECTORS' EXAMINATION BOARD.—An examination for certificates of qualification for appointment of sanitary inspector or inspector of nuisances under Section 108 (2) (*d*) of the Public Health (London) Act, 1891, will be held in London on Tuesday, Jan. 17th, 1905, and the four following days. Particulars will be forwarded on application to the honorary secretary, the Sanitary Inspectors' Examination Board, 1, Adelaide-buildings, London Bridge, London, E.C.

THE CANCER HOSPITAL, LONDON, S.W.—Lady Ludlow has kindly promised to open the new nurses' home erected in the hospital grounds on Nov. 14th at 3 P.M. The nurses at present are accommodated at the top of the hospital building in cubicles. The new home will provide separate bedrooms for each nurse and a separate sitting-room for the sisters and nurses. The cost of erecting and equipping the home is about £5500 but the committee feels that the expenditure is justifiable, bearing in mind the arduous duties that the nurses at such a special hospital have to perform.

PUBLIC VACCINATORS OF ENGLAND AND WALES.—The annual meeting of the Association of Public Vaccinators of England and Wales was held on Oct. 28th at the Hotel Cecil, London, with Mr. E. C. Greenwood in the chair. A motion was proposed by Mr. A. A. Napper, seconded by Dr. F. W. Stansfield, and passed, that the annual subscription to the association should be reduced in the cases of those public vaccinators whose fees did not amount to £20 annually. The members present unanimously agreed that the Revaccination Bill ought to be supported and its passing through Parliament assisted. A motion to memorialise the Local Government Board as to superannuation of public vaccinators and fixity of tenure was proposed by Dr. A. E. Cope and seconded by Dr. T. Elliott and was referred to the council of the association for consideration. A motion requesting the council to consider the advisability of bringing before the Local Government Board the irregularity in the administration of the Vaccination Acts was proposed by Dr. Stansfield, seconded by Dr. H. J. Neilson, and carried. In the evening the members and friends of the association dined at the Hotel Cecil under the chairmanship of the President, Mr. Greenwood, who, in proposing the toast of "The Association," announced that it numbered over 1000 strong. Dr. Cope, in responding, congratulated the members on the recognition that had been accorded to the association by the Local Government Board. Dr. Arthur Drury proposed "The Visitors," which was acknowledged by Sir Constantine Holman and Dr. John Galton. Mr. R. Macartney submitted "The Officers of the Association" and in a racy speech amused and instructed his audience. This toast was acknowledged by Mr. C. Greenwood and Mr. V. A. Jaynes and after the latter had proposed the health of "The President" the proceedings closed with that officer's thanks for the compliment.

UNIVERSITY COLLEGE, BRISTOL.—At the annual distribution of prizes by Sir William S. Church on Oct. 28th the following clinical scholarships, prizes, medals, and certificates were awarded in the faculty of medicine:—Martyn memorial pathological scholarship (£10), R. O. Bodman and M. R. Wilson (equal). Tibbits memorial prize (value nine guineas) for practical surgery, S. C. Hayman and W. J. Pinniger (equal). Augustine Prichard prize (six guineas) for anatomy, F. Shingleton Smith and A. Thomas (equal). Henry Clark prize (value 11 guineas) for third-year students, V. B. Green-Armytage. Suple medical prize (a gold medal and seven guineas) for clinical medicine, S. C. Hayman. Henry Marshall prize (value £12) for proficiency during dresserships, J. S. Avery and W. J. Pinniger (equal). Clarke scholarship (value £15) for proficiency during dresserships, L. N. Morris. Sanders scholarship (value £22) for medicine, surgery, and diseases of women, L. N. Morris. Special midwifery certificates, S. C. Hayman and A. Thomas. Committee gold medal (awarded to most distinguished student), S. C. Hayman. Committee silver medal (awarded to the next most distinguished student), L. N. Morris. University entrance scholarship (£50), L. J. Short. Lady

Haberfield entrance scholarship (£30), C. Clarke. Winter session.—Medicine prize, H. Gough; certificates, A. Thomas, W. J. Pinniger, and R. E. Thomas. Surgery prize, W. J. Pinniger; certificates, J. Avery, V. B. Green-Armytage, and A. J. Wright. Public health prize, S. C. Hayman; certificates, J. Blackett and W. J. Pinniger. Senior anatomy prize, P. Tomlinson; junior anatomy prize, C. Clarke. Biology prize, H. Templeton. Chemistry prize, H. Templeton. Summer session.—Pathology and morbid anatomy prize, W. J. Pinniger; certificate, F. Bergin. Medical jurisprudence prize, F. Shingleton Smith; certificates, A. Thomas, F. Bergin, W. J. Pinniger, and M. R. Wilson. Operative surgery prize, W. J. Pinniger; certificates, A. Thomas, F. Bergin, J. Board, and A. Wright. Midwifery prize, A. Wright; certificates, J. Blackett, J. Board, E. Christofferson, W. King, and R. Thomas. Practical medicine, surgery, and midwifery prize, A. Wright; certificates, J. Blackett, V. B. Green-Armytage, and J. Board. Practical chemistry prize, H. Templeton; certificate, S. Kingston. Materia medica and practical pharmacy prize, J. F. Morgan; certificates, F. Morgan and C. Clarke.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BLYTH, R. C., L.R.C.P. & S. Edin., has been appointed Resident Physician to the Royal Infirmary, Glasgow.

BRADSHAW, THOMAS R., M.D. Dub., F.R.C.P. Lond., has been appointed Examiner in Medicine in the University of London.

BROCKBANK, E. M., M.D. Vict., M.R.C.P. Lond., has been appointed Junior Physician to the Children's Hospital and Dispensary, Manchester.

BUCHANAN, P. S., M.B. Glasg., has been appointed in Charge of the Outdoor Midwifery Department of the Glasgow Public Dispensary.

BURNEY, C. D. FRANCIS, M.R.C.S., has been appointed Divisional Surgeon to the R Division Metropolitan Police (Deptford), and also Divisional Surgeon to the police stationed at Deptford Victualling Yard (Woolwich Division).

CHICK-LUCAS, J. R. G., M.R.C.S. Eng., L.S.A., has been appointed Medical Officer to the Post Office and Medical Examiner to the Board of Education, Brading, Isle of Wight.

COATES, HARCOURT, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health of Salisbury.

CONNAL, ANDREW, M.B., Ch.B. Glasg., has been appointed Resident Physician to the Royal Infirmary, Glasgow.

COUTTS, E. N., M.B. Toronto, L.R.C.P. & S. Edin., has been appointed Resident Physician to the Royal Infirmary, Glasgow.

FLEMMING, ARTHUR L., L.R.C.P. Lond., M.R.C.S., has been appointed Anæsthetist to the Royal Infirmary, Bristol.

FULTON, HUGH H., M.B., Ch.B. Glasg., has been appointed Resident Casualty Surgeon to the Royal Infirmary, Glasgow.

JEX-BLAKE, BERTHA, M.B., Ch.B. Edin., has been appointed Assistant Medical Officer to the Herefordshire Asylum.

LETT, HUGH, M.B., Ch.B. Vict., F.R.C.S., has been appointed Assistant Surgeon to the Belgrave Hospital for Children.

LOCHRANE, CHARLES D., M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

MCCALLUM, JOHN D., M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

MACPHAIL, DUGALD H., M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

MCVAIL, J. ROY, M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

MALCOLM, HUTTON, M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

MARTIN, ANNA P., M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

MELLAND, CHARLES H., M.D., M.R.C.P. Lond., has been appointed Assistant Physician for Children to the Northern Hospital, Manchester.

NIELSON, GEORGE C., M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

PATERSON, JAMES B., L.R.C.P. & S. Edin., has been appointed Resident Physician to the Royal Infirmary, Glasgow.

PATRICK, HOWARD H., M.B., Ch.B. Glasg., has been appointed Resident Surgeon to the Royal Infirmary, Glasgow.

PRATT, ELDON, M.D. Lond., has been appointed Medical Officer to Post Office, Henfield District, Sussex.

STEWART, JOHN B., M.B., Ch.B. Glasg., has been appointed Senior Resident Surgeon to the Royal Infirmary, Glasgow.

TAYLOR, E. GRAHAM, M.B., has been appointed to the Gynæcological Department of the Glasgow Public Dispensary.

TAYLOR, GERALD C., M.D. Cantab., D.P.H., has been appointed County Medical Officer of Health of Berkshire.

TELFORD, E. D., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior Surgeon to the Children's Hospital and Dispensary, Manchester.

TOVEY, ARTHUR H., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the General Lying-in Hospital, Lambeth.

WHITEHOUSE, A. L., L.R.C.P. Lond., M.R.C.S., L.D.S., has been appointed Demonstrator of Operative Dentistry at the Royal Dental Hospital of London.

WILDISH, GEORGE H., M.B., Ch.B. Glasg., has been appointed Resident Physician to the Royal Infirmary, Glasgow.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Senior and Junior Resident Medical Officers, both for six months. Honorarium at rate of £20 and £10 per year respectively, with board and lodging.

BIRMINGHAM CITY ASYLUM, Rubery Hill, near Birmingham.—Junior Assistant Medical Officer. Salary £150 per annum, with board, &c.

BIRMINGHAM, UNIVERSITY OF (FACULTY OF MEDICINE).—Professor of Anatomy. Stipend £800 per annum.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 per annum, with apartments, board, attendance, &c.

BURMA RAILWAYS COMPANY.—Medical Officer. Salary not less than Rupees 750 per mensem.

CIRENCESTER UNION.—Medical Officer for the North District.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant Physician.

INDIAN MEDICAL SERVICE, India Office.—Examination for not less than 12 Commissions in His Majesty's Indian Medical Service.

LEICESTER INFIRMARY.—House Surgeon. Salary £100 per annum, with board, apartments, and washing.

LIVERPOOL STANLEY HOSPITAL.—Honorary Anæsthetist.

MANCHESTER JEWISH HOSPITAL.—Resident Medical Officer. Honorarium £80.

MANCHESTER, ST. MARY'S HOSPITAL, Oxford-street, Manchester.—House Surgeon and Resident Obstetric Assistant Surgeon. Salary £100 per annum, with board and residence.

METROPOLITAN ASYLUMS BOARD ASYLUM, Leavesden, near Watford, Herts.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £170, with rations, lodging, attendance, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Surgeon.

MICKLEOVER, DERBY COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £120, rising to £150 per annum, with apartments, board, washing, and attendance.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, London, W.C.—House Physician. Salary £50 a year, with board and residence.

NEWCASTLE-UPON-TYNE CITY HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Assistant. Salary at rate of £100 per annum, with board, residence, &c.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—House Surgeon. Also House Physician, both for six months. Salary at rate of £60 per annum, with board, residence, and laundry in each case.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer. Also Assistant Resident Medical Officer, both for six months. Salary at rate of £50 per annum, with board, residence, and washing in each case.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board and residence.

PECKHAM HOUSE ASYLUM.—Second Assistant Medical Officer. Salary £150, resident.

PORTSMOUTH, ROYAL HOSPITAL.—Senior House Surgeon, unmarried. Salary at rate of £100 per annum, with board, residence, &c.

READING, ROYAL BERKSHIRE HOSPITAL.—House Physician for four months. Salary at rate of £80 per annum, with board, lodging, and washing.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Dental Superintendent. Honorarium £250 per annum.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Junior Obstetric Assistant (female) for six months. Board, lodging, and laundry provided.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow, E.—Resident Medical Officer, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.

SALISBURY, FISHERTON HOUSE ASYLUM.—Medical Superintendent, unmarried. Salary £400 per annum, rising to £500, with board, lodging, and washing.

SUSSEX COUNTY HOSPITAL.—House Physician, unmarried. Salary £70 per annum, with board and residence.

WANDSWORTH UNION INFIRMARY, St. John's-hill, near Clapham Junction.—Junior Assistant Medical Officer. Salary at rate of £100 per annum, with board, lodging, and washing.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Terms £70 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BROWNFIELD.—On Oct. 30th, at the Old College, Petersfield, Hants, the wife of H. M. Brownfield, M.R.C.S., L.R.C.P., of a daughter.

HARRIS.—On Oct. 10th, at 12, Buckingham-place, Brighton, Lillian Cunard Harris (*née* Cummins), L.R.C.S., L.R.C.P.I., L.M., wife of Henry Arthur Clifton Harris, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MOUNSEY.—On Oct. 26th, at Calthorpe-road, Edgbaston, the wife of G. H. Mounsey, M.B., C.M. Edin., of a daughter (stillborn).

WILKINSON.—On Oct. 28th, at Edgeworth, Simla, the wife of Major Edmund Wilkinson, Indian Medical Service, of a daughter.

DEATH.

ECCLES.—On Oct. 26th, at Plymouth, Alfred Leslie Anderson Eccles, B.A., L.R.C.S.E., aged 50.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

AN INQUEST ON A CHILD FOUND ON A DOORSTEP.

A MALE infant about three months old was found on a doorstep at Wandsworth and removed to the workhouse on Oct. 11th. On the 22nd he was placed in the infirmary, where he died a few days later. At the inquest no evidence was forthcoming as to the child's condition when he first reached the workhouse, the medical officer of the infirmary being only able to testify to what he had observed while the deceased was under his care. The child had suffered from rickets and death had been due to exhaustion following colitis. The coroner in summing up to the jury observed that when a child was admitted to a public institution on a cold foggy night in such circumstances as witnesses had described, the condition on admission should be properly observed and recorded. The jury returned a verdict in accordance with the medical evidence and requested the coroner to censure the workhouse authorities.

THE APPEAL ON BEHALF OF MISS E. B. PELLATT, L.S.A.

To the Editors of THE LANCET.

SIRS,—As the time for closing this fund is rapidly approaching will you permit me on behalf of the committee cordially to thank you for the help you have given in allowing the appeal to appear in your columns and the lists of contributions to be duly reported, and also at the same time warmly to thank those who have so generously contributed. The result has been that a sum of about £325 has been received, the annual income accruing from which will greatly assist towards the attainment of that "modest competence" for Miss Pellatt which was the object the promoters had in view when they originated the appeal. May I add further that suggestions have been made to form an "annual subscription list" of one guinea or less and four individuals have already expressed their wish to contribute to it. The committee has concurred in this suggestion and should anyone else also be disposed to join in it the treasurer, Surgeon-Colonel F. H. Welch, 8, Brandram-road, Lee, S.E., will be glad to receive their names.

I am, Sirs, yours faithfully,

E. F. DRAKE-BROCKMAN, F.R.C.S. Eng.

Welbeck-street, W., Oct. 31st, 1904.

EELS IN VINEGAR.

WITH regard to the letter upon this subject which appeared in our issue of Oct. 22nd, p. 1192, a correspondent writes:—

"Eels" in vinegar or paste are small varieties of nematode "worms," generally belonging to the genus Anguillula. Their rate of multiplication is very rapid, they are of the usual threadworm shape, are nearly transparent, and have a very thick cuticle. They have an extraordinary power of resisting desiccation and the eggs (possibly the adult form) have been described as existing alive in a dried state for fourteen years. Some at least of the Anguillulæ (A. macroura and A. appendiculata) are found in a sexual form in the intestine of the cockroach (Blatta orientalis) [Van Beneden, quoted from Radkewisch]. The eggs pass with the fæces of the cockroach and are probably the channel of infection of paste, vinegar, and putrefying cereal foods.

Van Beneden classes the "vinegar eel" as possibly a form of rachitis (nematode) akin to Anguillulina dipsaci which attacks the flowers of the teazel (Dipsacus Fullonum), but it is difficult to see how this nematode could gain access to vinegar or paste. It is much more probable that the forms of Anguillulæ known to exist in cockroaches are the ones found in vinegar.

Though there is no absolute evidence that these varieties of nematodes do propagate in human intestines, the extraordinary vitality of these animals would render such an experiment very risky and should be quite sufficient ground for condemning any article of food in which they have been found to exist.

The life-history of these nematodes is highly interesting historically, as their resuscitation from a desiccated state was one of the most important points of evidence claimed years ago by such untrained observers as G. H. Lewes for the establishment of the theory of "biogenesis."

A form of Anguillulina (A. tritici) which infests various cereals was described by Needham most carefully in 1747.

MILK AND REST CURE.

A CORRESPONDENT writes that he would be very much obliged to any of our readers who could give him the address of a sanatorium or institution where a milk and rest cure similar to those which obtain on the continent could be carried out.

SIX CHILDREN AT ONE BIRTH.

THE October number of the *Pacific Medical Journal* quotes Dr. Vortisch, physician of the Basle Mission on the Gold Coast, West Africa, as saying: "I attended the birth of six babies at Accra, the chief town of the Gold Coast, some years ago. The mother was a native negress. She had been a mother five times before. The second time she brought forth twins, the third time four babies, the fourth time triplets. Of the six children born in my presence five were boys. All had the appearance of healthy children save one, which died soon after birth. The other children lived from a week to ten days, and died of their mother's neglect, not on account of some constitutional weakness."

P. R. S.—A patient has a perfect right to change his medical man at his own pleasure. With regard to the practitioner, who assisted our correspondent upon a former occasion, taking up the case, we do not think that he can be held to be acting unprofessionally provided that he has acquainted our correspondent with the fact that the patient has applied to him. Many medical men, however, in the circumstances would have been reluctant to take the case, and would only have done so upon a clear assurance from the patient that, whomsoever he employed, he would not call in his original medical adviser. Such awkward occurrences should never be allowed to interfere with professional relations between medical men.

Res. Med. Officer.—Our correspondent is bound, under protest it may be, to say what he knows to be a fact, but it is no part of his duty in the circumstances to speculate on the possible or probable duration of infectivity.

Dry Rot.—The subject is dealt with in an annotation in our present number.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (8th).—MEDICO-LEGAL SOCIETY (22, Albemarle-street, W.).—8.15 P.M. Sir W. Collins: Presidential Address.—Papers:—Dr. T. C. Shaw: Obscure Form of Alcoholism involving Irresponsibility.—Mr. S. B. Atkinson: Definitions of Accident and Accidental.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Pharmaceutical Meeting. Papers:—Dr. E. Drabble and Mr. F. A. U. Smith: The Botanical Source of Derbyshire Valerian. Communication from the Compendium Committee:—Prof. Greenish: Official Processes for Galenical Preparations (The Results of an Examination of some suggested Modifications).

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. W. Thorburn: The Seventh Cervical Rib and its Effects upon the Brachial Plexus.—Dr. G. N. Pitt: Two Cases of Fungating Endocarditis followed by Convalescence.

WEDNESDAY (9th).—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstration of Cases of Interest.

SOUTH-WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital, Wandsworth Common).—9 P.M. Paper:—Dr. W. W. H. Tate: The Diagnosis and Treatment of Tubal Gestation in the Early Weeks.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—9 P.M. Lecture: Dr. R. Bradford: The Treatment of Bright's Disease.

THURSDAY (10th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Papers:—Dr. Macnaughton-Jones: Embedded Adnexa. Carcinoma of Fallopian Tube, Hæmorrhagic Endometritis.—Dr. B. Fenwick: Uterine Fibroids associated with Ovarian Disease. Adjourned Discussion on Mr. C. Martin's paper on the Treatment of Severe Prolapse by Extirpation of the Uterus and Vagina.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M. Card Specimens will be shown by Mr. Doyne and Mr. Stephenson. 8.30 P.M. Paper:—Mr. S. Snell: Intraocular Tumour covering the Optic Disc.

FRIDAY (11th).—THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9, Adelphi-terrace, Strand, W.C.).—7.30 P.M. Paper:—Dr. G. A. Heron: Instruction in Hygiene in Universities and Schools—a Proposal.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (Medical Society's Rooms, 11, Chandos-street, Cavendish-square, W.).—3.30 P.M. Council Meeting. 4 P.M. Exhibition of Cases, Specimens, and Instrument. 4.15 P.M. General Meeting. Presidential Address. Dr. Horne: Pachydermia Laryngis.

PORT SANITARY ASSOCIATION (Westminster Palace Hotel).—12 noon. Meeting.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. C. R. Keyser: A Case of Congenital Elevation of the Scapula.—Dr. P. D. Turner and Mr. R. Johnson: Traumatic Axillary Aneurysm successfully treated after Extravasation had occurred by Proximal Ligature.—Mr. B. Robinson and Mr. E. M. Corner: Aneurysm of the Intracranial Part of the Left Internal Carotid caused by a Bullet Wound through the Right Eye.—Mr. S. Paget: A Case of Appendix Abscess followed by Abscess in the Left Iliac Region.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. C. FOX: Clinique. (Skin.) 5.15 P.M. Mr. C. R. B. Keetley: Plastic Surgery.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: The Investigation of Severe Cases of Gastric Disorder.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM (City-road, E.C.).—2.30 P.M. Mr. F. Wallis: Lecture-Demonstration on Diseases of the Rectum.

TUESDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.) 5.15 P.M. Dr. D. Grant: Illustrations of Disease affecting the Nasal Sinuses.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Is Glaucoma a Neurosis?

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Sir V. Horsley: Cerebral Surgery.

WEDNESDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. W. Roughton: Clinique. (Surgical.) 5.15 P.M. Mr. F. C. Wallis: Injuries to and Diseases of Joints.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (North-Eastern Fever Hospital, St. Ann's-road, N.).—2.30 P.M. Dr. H. Cuff: Demonstration on Fevers.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Maguire: Venesection in Disorders of the Circulation.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM (City-road, E.C.).—10.30 A.M. Mr. L. Mummery: Clinical Demonstration in the Out-Patient Department.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Demonstration:—Dr. Wylie: Naso-Pharynx.

THURSDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. W. Ewart: The General Management and Special Methods of Treatment of Heart Cases.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Nephritis.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Dr. Lockyer: Gonorrhœa in Women.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Lecture: Dr. G. Johnston: Aortic Aneurysm (illustrated by cases). (Post-Graduate Course.)

CHARING CROSS HOSPITAL.—4 P.M. Mr. Waterhouse: Demonstration of Surgical Cases. (Post-Graduate Course.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture:—Mr. H. W. Carson: Middle-Ear Catarrh.

FRIDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. StClair Thomson: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. J. Reece: Disposal of Refuse.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Dr. Ferrier: Cases in the Wards.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 3rd, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp Shade.	Min Temp	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
Oct. 28	30·16	S.E.	...	85	58	45	50	54	Fine
,, 29	30·27	N.E.	...	88	68	43	44	45	Fine
,, 30	30·12	E.	...	68	52	45	48	49	Overcast
,, 31	30·11	N.E.	0·01	51	51	49	48	49	Raining
Nov. 1	30·22	N.E.	0·05	54	52	48	49	50	Raining
,, 2	30·47	N.E.	...	67	53	48	47	49	Cloudy
,, 3	30·34	S.W.	...	79	56	48	46	48	Cloudy

During the week marked copies of the following newspapers have been received:—*Dublin Herald, Pall Mall Gazette, Morning Post, Morning Leader, Daily Chronicle, Times, British North Borneo Herald, Yorkshire Daily Observer, Liverpool Courier, South Wales Daily Echo, Cambridge Chronicle, Eastern Daily Press, Western Mail (Cardiff), Bolton Daily Chronicle, Westminster Gazette, Irish Times, Spectator, East London Observer, &c.*

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